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Winslow **ART IN SECONDARY EDUCATION**
Winslow **ART IN ELEMENTARY EDUCATION**

JUNIOR HIGH SCHOOL EDUCATION

Its Principles and Procedures

BY

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JUNIOR HIGH SCHOOL EDUCATION

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GUIDING MODERN YOUTH TOWARD
THE BETTER LIFE IN DEMOCRACY
WHO ARE

To the Teachers

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PREFACE

The junior high school was created to help solve certain educational problems that now have largely ceased to exist. Like other divisions of the public schools, it must serve unique purposes in the total scheme of education or be combined with a higher or lower division. Nevertheless, the junior high school has experienced an unprecedented growth and popularity, even during the "depression decade" 1929-1939. Junior-high-school education is more expensive than elementary education and hence is desirable or defensible only insofar as it contributes more fully to the personal development of pupils and to the needs of society.

The reorganization of secondary education has led some educators to question the need for continuing a junior division of the high school; yet the continuously accumulating evidence of child growth and development, in relation to similar evidence in the field of the psychology of learning, points increasingly toward the desirability of a separate educational unit for pupils who are entering and emerging from the period of pubescence. In the absence of crucial experimental data demonstrating the superiority of junior-high-school education for pupils within the junior-high-school age range, it seems appropriate to examine the evidence upon which a logical assumption of superiority can be based. It likewise seems appropriate to review the currently defensible principles and procedures of junior-high-school education in order that these may be more readily evaluated and improved.

Accordingly, the present volume has been conceived for the purpose (1) of bringing into relief the experimental evidence about pupils and the survey data of society that bear on the problem of junior-high-school education and (2) of reviewing effective principles and procedures of junior-high-school education.

The entire field of junior-high-school education must necessarily be restricted in order to be encompassed within the scope of a single volume. The present treatment, therefore, presents briefly (1) the historical educational background and perspective out of which there emerged the junior high school; (2) the characteristics of pupils and the social conditions that indicate a continuing need for

junior-high-school education; (3) the guidance program and special provisions for exceptional children as essential functions and services of junior-high-school education; (4) the total program of studies as the center of developmental activities and as the means of realizing the objectives of the junior high school; and (5) the dependence of the entire program upon suitable administrative procedures and relationships that involve not only the school staff and the pupils but the school plant and the supporting school community as well.

The volume is written as a text for prospective teachers in teacher-training institutions and for in-service teachers and administrators who are concerned with improving junior-high-school education.

The authors wish to express their appreciation for the criticism, advice, and contributions of many persons and organizations who have aided in the preparation of this book. Special acknowledgment is due the public schools of Berkeley, Fresno, Los Angeles, Oakland, Redlands, Richmond, San Francisco, and San Jose, California, for their contributions of photographs, data, and other illustrative materials. Throughout the text, specific acknowledgments have been made in footnote references to contemporary writers and to publishing houses who have been generous in granting permission to use copyrighted materials. The authors are also greatly indebted to Gladys Camp Smith and Esther Hagan Standley for inspiration and untiring assistance in typing and reading and editing the manuscript through its several stages of development.

MAURICE M. SMITH,
L. L. STANDLEY,
CECIL L. HUGHES.

REDLANDS, CALIF.,
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EDITOR'S INTRODUCTION

Although the junior high school idea is somewhat old and the institution itself is relatively young the latter has aged more rapidly than the former. It is more than a half century since Charles W. Eliot officiated at the birth of the idea and hardly more than half that time since Frank F. Bunker fathered the first seventh-eighth-ninth-grade institution of modern type. Yet today, the junior high school has a maturity in practical operation which it sometimes seems to lack in the theory underlying its operation.

Perhaps this situation is as it should be. Nevertheless it suggests that the junior high school may soon reach a danger point in its development, if it has not already arrived there. That is the point reached in time by almost every human institution. It is the point where the structure and machinery of the institution acquires a greater weight of prestige than have the purposes of the institution, where devices come to loom larger than goals and where it seems more important to have a particular organization than to attain the objectives for which the organization was originally designed.

The real objectives of a school or of any other social institution change in response to the demands of a changing society. When they cease to meet those demands, they become pseudo objectives, verbalizations of past action, echoes of once-important jobs. If then the school or other institution continues to follow its accustomed routines under the direction of past purposes it is truly in grave danger. The social woods are full of the dead stumps of once-flourishing institutions. *After they lost the heart of their purposes they looked vigorous—for a while, but then there came a storm and down they crashed.*

The American junior high school is a flourishing institution. Its purposes are clearly derived from the needs of younger adolescents and pre-adolescents in our society. But the rising storm of which the present war is only one gust, warns all schools to examine themselves carefully and critically. There have been many excellent books written on the junior high school in the last quarter

century, but there was never greater need than today for one which would examine this institution's purposes and procedures in relation to the current scene

The present work, written by men distinguished in both the practice and the theory of junior-high-school education, is offered to all junior high-school educators in the hope that it may help in the task of strengthening the junior high school against the rising storm

HAROLD BENJAMIN

UNIVERSITY OF MARYLAND,
July 1942

JUNIOR HIGH SCHOOL EDUCATION

CHAPTER I

INTRODUCTION TO JUNIOR-HIGH-SCHOOL EDUCATION

American education has evolved through varied stages and procedures of change and experimentation to meet changed religious, industrial, political, and social conditions observable at different periods of our colonial and national history. Similarly, education has evolved in response to changed interpretations of the purposes and responsibilities of the schools in our total social structure. Societal factors affecting the form and function of any social institution such as education are rarely simple one-directional forces. It must not be supposed that education has evolved from the influence of first one factor and then another. Rather there has been a constant interplay of many factors, in which causal origins and causal sequences are extremely difficult to discover. In spite of the obscurity of specific causal origins, we may say with assurance that the junior high school emerged and became a part of the structural form of our schools in response to a complex of factors that long have contributed to the ever-changing plan of American education.

EARLY COLONIAL BEGINNINGS

Early American colonists organized and conducted the only kind of schools with which they were familiar—the popular schools of the countries from which they emigrated. The purposes that the schools were to perform in the several colonies varied with the dominant social, religious, and economic purposes of the groups themselves. Although in form, European continental schools in the elementary, secondary, and higher divisions were not radically different from those in England, the dominant purposes of the colonists were different, and as a consequence, from the very begin-

ning, there was observable a decided lack of uniformity in the character of the schools created in colonial America

English Schools Transplanted—In the field of elementary education, the colonial dame school, the reading school, and the writing school, all were patterned after English prototypes. As in England, the first dame schools and the first writing and reading schools were operated independently to carry on what we now think of as primary and intermediate elementary education. These schools were developed in England to meet local needs under an English philosophy of education. From the very beginning they were not well suited to colonial needs.

The most popular secondary school in England was the classical Latin grammar school, which, like the elementary schools, was transplanted bodily to the colonies. It should be remembered that Latin was still the language of the scholar and that most important documents and literature were to be found only in the Latin. It should be remembered, too, that Latin had been the official language of the church for eleven hundred years. Secondary schools throughout Europe, the Latin grammar school in England, the *Gymnasium* in Germany, and the *lycée* in France all strongly emphasized the mastery of Latin not only as a language of communication but as a preparatory tool for collegiate study.

As with the elementary and secondary schools, collegiate education in the colonies was patterned after education in English colleges. Harvard college had as its original purpose the training of young men for the ministry. The curriculum was narrow and classical, with the major emphasis upon Latin and religious instruction. Other early colonial colleges were patterned closely after Harvard or after European universities.

In the organization of colonial elementary, secondary, and higher schools, at least three conditions should be noted: these are (1) colonial schools in each division were patterned after English-type schools, (2) colonial schools were not designed specifically to meet local needs and educational purposes, and (3) each division of the schools was created independently of the others, so that there existed no coordinating plan running throughout the three divisions.

Modification of English-type Schools.—The rigorous conditions of frontier life in colonial America were not conducive to the development of a complex school organization that might have been well suited to the conditions of English life. The dominant purposes of the colonists were different from the purposes of the majority of

English citizenry General frontier conditions, such as the difficulties of wresting a livelihood from the new unsettled country, sparse settlements, poor means of transportation, and the scarcity of trained teachers soon made it apparent that it was not feasible to continue the three separate types of elementary schools that had been brought to the colonies from England

Elementary Schools—As a step in the development of a distinctively American plan of education, there soon evolved a new type of school combining the essential features of the dame school, the reading school, and the writing school

This new school was distinctively an American creation It was the school of the three R's, "readin', 'ntin, and 'rithmetic" Typically, the school of the three R's was a one-room, one-teacher, ungraded school, which long has been symbolic of early American education

Secondary Schools—In spite of its European popularity and its literary and cultural prestige, the Latin grammar school did not become popular in the colonies Frontier conditions did not encourage the widespread dissemination of classical humanistic learning Although for a time these schools were conducted successfully in New England, modifications were introduced in other colonies in a school called the "English grammar school" In this school "all branches of Mathematics, Geometry, Algebra, Geography, Navigation Merchants Bookkeeping"¹ were taught, thus enlarging and broadening the narrow emphasis upon the classical Latin literature that constituted the only curriculum of the Latin grammar school

The curriculum of the new English grammar school included subjects that were of immediate practical use to students Such courses prepared youths to enter directly into occupations and adult activities of the time The popularity of the English grammar school may be attributed largely to its practical usefulness under frontier conditions

Partly because of the demand for preparation for college and partly because of the academic prestige of classical humanistic learning, English grammar schools, like the Latin grammar schools, tended to become more and more college preparatory in function and less practical in their curricular offerings In response to popular demands for practical training, private secondary schools were organized. These were known as "academies" The cur

¹ COBBERLEY E P *Public Education in the United States* p 63 Houghton Mifflin Company, Boston 1934

riculum of the academies emphasized practical studies attuned to the local immediate training needs of the day. In these schools for the first time girls were admitted for study at the secondary level. In the beginning academies made no effort to prepare youths for college work. Some of the academies were so successful in providing for the needs of the pupils that, even though privately owned and administered, they were partially subsidized with public money.

The academies should be considered as transition schools. For although they, in turn, became strictly college-preparatory schools, they demonstrated the practicability of meeting at least three American educational needs: the need for the higher education of women, the need for practical training for adult life, and the need for a publicly controlled secondary school to serve these ends.

Higher Education—Modifications in the early pattern of college education, similar to those observable in elementary and secondary education, are noticeable likewise in the evolution of higher education. At each level the factors and influences making for change were the same, although higher education has been less responsive to public demands. However, new professional curriculums such as law, medicine, and engineering were added to college programs.

During the nineteenth century, colleges were opened to women students. Technical colleges were organized. State universities were created. Land grant agricultural and mechanical colleges were made an integral part of higher education, and public normal schools were organized to train teachers. These and many other external and internal changes are evidence of the evolutionary developments effected in higher education in response to the needs and interests of the public.

Colonial Educational Purposes—In the New England and middle colonies, elementary education was carried on to teach children to read the Bible and to teach them the catechism of the religious faith of their parents. Although religious purposes dominated education in all these colonies, an important difference early developed between the attitude of the New England colonies and those of the middle colonies.

Massachusetts, typical of the New England colonies, was settled by Calvinistic Puritans who were of the same faith. At first the little New England towns made no distinctions between the church meetinghouse and the town hall. Schools were conducted either by the ministers or by persons whose most essential qualification

for teaching was orthodox adherence to the Calvinistic faith. With the purpose of education thus dominated by the church, there evolved the concept of universal compulsory education at public expense.

On the other hand, New Jersey and Pennsylvania, representative of the middle colonies, were settled by Protestants from various sections of Europe who were adherents of different religious sects. Since each religious sect or faith looked upon education largely as a means of furthering its doctrines among the next generation, education was carried on in each community under the auspices of the prevailing denomination. Accordingly, there developed in the middle colonies the attitude that education was strictly a function of the church rather than of the state. In accordance with this principle, parochial schools became characteristic of the middle colonies.

Virginia, typical of the Southern colonies, was settled by planters interested in economic gain. Southern plantation owners were English gentlemen who were interested in perpetuating the aristocratic customs and traditions of Great Britain. They were satisfied with the Church of England and were not dominated by religious motives. Large plantations of cotton or tobacco demanded the services of large numbers of cheap laborers, which at first were supplied by indentured servants from England and later by Negro slaves. In this scheme of things, education was considered a private affair, just as it was in England. It was of little concern to the state whether schools were maintained or not. The wealthier class employed tutors for their children and sent them to finishing schools or professional schools in Europe. Children of the poor were given a meager education in charity or pauper schools, or they were apprenticed to employers. Although practices varied in some sections of the South, in general this attitude toward education was fairly characteristic of the plantation colonies.

Summary of Early Trends—The responsiveness of early American schools to the varying purposes and needs of controlling local groups of settlers has significant bearing upon education in America today in that far reaching principles were established that have continued to dominate the evolutionary development of later education. At least three of these should be noted.

The Principle of Universal Free Education—The principles and the patterns for the later development of universal, free, tax-supported schools clearly were established during the early years of

our colonial and national history The major battles to put these principles into practice were left for the nineteenth century, but these struggles were based upon earlier concepts and principles that were evolved during the colonial period Thus, growing out of the dominant religious purposes of the New England colonies, there has been handed down a supreme faith in universal education as the best means for promoting the welfare of the state and, along with this concept, the correlative principle that the wealth of the state should educate the children of the state

The Principle of Local Control—Necessarily, independence and self reliance were characteristic of those pioneer settlers who survived General frontier conditions with difficulties of transportation and communication, together with the constant westward migration, tended to encourage local control over all governmental and religious activities of the communities The organization and control over the schools proved no exception to this condition The principle of local control of the schools thus had its roots in our earliest educational organizations, and it has been handed down as a part of our American heritage that is still cherished as a distinctively American ideal

The Principle of Change—Underlying the implementation of the principles of universal free education supported by the state under local control, there should be recognized a further principle, which has been characteristic of American education since the beginning This is the principle of change with reference to the form, the means, and the function of education As frontier conditions changed, as political and economic conditions changed, as the dominating ideals and needs of groups changed, so did the schools in response to these forces Although there has always been a noticeable and perhaps necessary lag between the offerings of the schools and the needs of society, consistently our schools have tended to reflect the dominant aspirations of the cultural milieu supporting them In no other system of education has this principle been quite so noticeable as it has in American education

NINETEENTH CENTURY TRENDS

The nineteenth century witnessed a remarkable growth and expansion of America. It witnessed, too, many striking changes in the nature and direction of our national life Outstanding among these changes should be mentioned (1) the manifold industrial changes associated with the rise of manufacturing, (2) the tremen-

dous population increases due to continued emigrations from Europe, (3) the unparalleled rapid growth of cities, together with a corresponding growth of new social and political problems, and (4) the extension of the suffrage and of the principles of democracy, which, for the first time, rendered articulate the voice of the masses in political and social reform.

New Educational Problems.—The varied industrial, political, and social changes mentioned above created many new educational problems and increased existing ones. The mushroom growth of cities was largely unanticipated and unplanned. Tenement districts, with their attendant social evils, became common. Social reformers became increasingly aware of the need for extending and expanding education so as to provide suitable facilities for neglected children in factory districts.

In the new cities, particularly under the older district system of control over schools, gross inequalities of educational opportunity became increasingly apparent. Frequently a wealthy district in a city maintained fairly adequate schools for the children of the district, whereas in the same city poorer districts maintained no schools of any sort. Some districts established public high schools, others were satisfied with or were able to support only the most meager elementary schools. Such inequalities brought to a head the issue of providing equality of educational opportunity for all children at state expense.

As soon as states began to furnish money to support schools in local districts, parochial schools wished to share in these gratuities. The crucial educational issue thus raised was whether public tax money should be allocated to church-controlled schools. Cubberley has described the struggle to establish free, tax-supported non-sectarian, state-controlled schools as following seven phases or stages that occurred more or less simultaneously in the various states. These were

- 1 The battle for tax support
- 2 The battle to eliminate the pauper-school idea
- 3 The battle to make the schools entirely free
- 4 The battle to establish state supervision
- 5 The battle to eliminate sectarianism
- 6 The battle to extend the system upward
- 7 Addition of the state university to crown the system¹

¹ *Ibid*, pp 177ff

Basic to the struggles described by Cubberley was the fact that Jacksonian democracy made articulate for the first time the voice of the masses. Educational privileges that had been available only to those able to pay for them now were demanded for all children at public expense. The continued public demand for these services resulted in a gradual acceptance of the principle that the wealth of the state should educate all the children of the state.

During the latter half of the nineteenth century, educational leaders such as Horace Mann, Henry Barnard, James Carter, and others focused public attention upon these inequalities. State governments were induced to offer financial aid to local communities willing to meet the minimum standards established by the state. Thus, gradually, first through state aid, then through state supervision supported by public attitudes, state systems of education were organized to equalize educational opportunities.

The Graded School—The elementary school of the three R's was ungraded. Children advanced individually in their studies as their abilities and progress warranted. Increasing school populations demanded modifications of the individualized instruction of the earlier schools. Efforts were made to meet these new demands and at the same time to improve instruction by classifying pupils into groups according to their skills and levels of achievement and by replacing individual instruction with group instruction. These efforts led to the development of the present system of graded schools. This evolutionary change was greatly facilitated by the remarkable growth of cities, with their ever-pressing demands for more school buildings and schoolrooms. Although wide variations in the form of graded schools existed in different sections of the country, the division of instruction into elementary and secondary, with further division by years or grades, was fairly well established in the cities by 1860.

The Emerging Ladder Plan of Education—During the latter half of the nineteenth century there was clearly evolving the structural form of education that so largely characterizes American schools today, that is, loosely organized state systems, tax supported, free of special rate bills, open to all children, free from sectarian control, built upon a single-track ladder plan extending from the first grade through the university. It should be remembered that there were, and still are, wide variations among the states with respect to (1) the length of the school year, (2) qualifications of teachers, (3) character of instruction, (4) equality of education for

different races, (5) adequacy of instructional materials, and (6) the inclusion of newer educational services, such as provisions for health, for exceptional children, for mental hygiene, for guidance, and, in general, provisions for individual differences among pupils. Nevertheless, the now familiar 8-4 plan of organization became the dominant pattern for elementary and high-school education in most

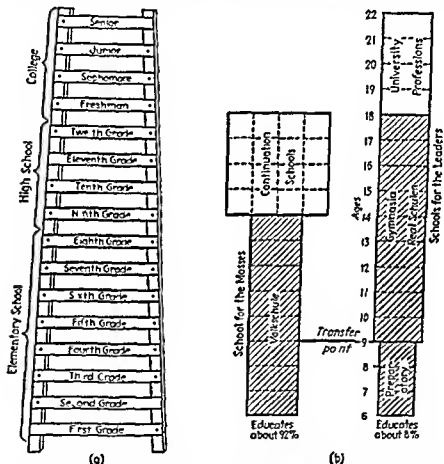


FIG. 1.—The American educational ladder (a) and the German state school system before 1914 (b) (Reproduced from Cubberley E. P., *Public Education in the United States* Houghton Mifflin Company Boston 1934.)

of the states by 1890. Apparently there was no sound educational or psychological basis for settling upon an eight-year elementary school followed by a four-year high school, and in certain New England states the elementary school was carried on for nine years, whereas in certain Southern states it was shortened to seven years. A practical reason for the long elementary-school period was that elementary training was the only schooling that the great majority

received, and although the curricular offerings were not broad, attempts were made to ensure a thorough mastery of fundamental skills and tools. The contrast between the American ladder plan and the typical European plan, as represented by Germany before 1914, is presented in Fig. 1.

The basic philosophy underlying the structural organization of our graded schools included the principle that all the children of all the people should be given equal educational opportunity at state expense. Underlying this principle were several assumptions. These included the beliefs that (1) the common curricular offerings constitute equality of educational opportunity, (2) the cultural training offered by liberal-arts colleges represents the highest and best form of intellectual development, (3) success in college depends upon the mastery of certain essential preparatory subjects in high school, (4) success in high school depends upon the mastery of the fundamental skills and tools allocated to the elementary school, and (5) the subject materials to be learned at each grade level represent the optimal assignments for all pupils in that grade for a full year's work.

Compulsory Attendance — With the structural form of our schools based upon a fairly widespread recognition of the principles of equality and the assumptions stated above, it was observed that many children were not attending school. The implementation of this principle was then attempted through compulsory attendance laws. As early as 1852, Massachusetts enacted a law making school attendance mandatory for all children between the ages of eight and fourteen. Although there has been a slow and uneven development of compulsory-school attendance practices among the states, today children from eight to sixteen usually are required to attend school for some minimum term. There is a distinct trend toward both a wider age range and a longer school year.

Universal Secondary Education — The first public high school was established in Boston in 1821 in response to public demands for a practical secondary school open to all children. In the establishment of this school, efforts were made to build it upon the foundations of the elementary school and at the same time to offer practical training for adult life on a coeducational basis. The public high school thus created may be considered the second unit in the American ladder plan of education.

The first free public high school was organized in 1821, but nearly sixty years elapsed before there was any rapid expansion of the high-

school movement During the period between 1821 and 1890, no accurate data are available to show the growth of public high schools Cubberley¹ estimates that there were probably about five hundred high schools in the United States by 1870 and about eight hundred by 1880 The growth of the high-school enrollments from 1870 to the present is presented in Fig 2 The most striking

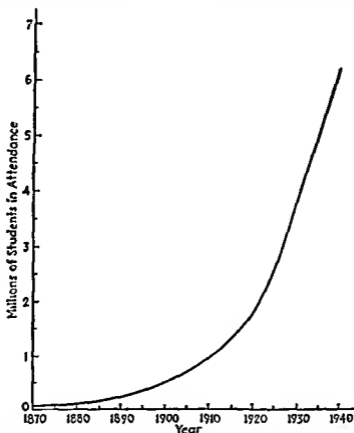


FIG 2—The growth of the secondary school population in the United States from 1870 (Data from *Biennial Survey of Education* 1928-30 1940 No 2 Chap V *School Life* 1937 Vol. 23 1940 Vol 26 No 1)

feature of this curve of growth is the extreme rapidity of its rise in recent years, particularly since 1910 The upward extension of compulsory attendance legislation, the scarcity of employment opportunities, and the public faith in education have been factors in the recent rapid growth of high schools The growth curve presented here should be compared with Fig 3, showing the total grade enrollment of public elementary and secondary schools from

¹ *Ibid*, p 627

1910 to 1938, and with Fig 4, showing the growth of junior high schools

The nineteenth century laid the foundation for the rapid growth of secondary education during the present century. The growing consciousness of the need for universal secondary education thus was characteristic of nineteenth century trends, but the actual establishment of these schools throughout the nation should be considered largely a twentieth century development.

Summary of Nineteenth Century Trends—The rapid development of America during the nineteenth century created many new social and educational problems and witnessed many successful struggles to extend and equalize educational opportunities for the masses at public expense. Noteworthy among the educational developments of this century are (1) the creation of graded schools, (2) the development of a single-track ladder plan of education, (3) the establishment of free tax-supported, nonsectarian state schools, (4) the introduction of compulsory-attendance legislation, (5) the establishment of the principle of universal secondary education as a part of the American plan of education, and (6) the creation of the state university to crown the system of public schools.

FACTORS LEADING TO THE ESTABLISHMENT OF THE JUNIOR HIGH SCHOOL

It will be recalled that no underlying plan of education was followed in the establishment of the elementary, secondary, and higher divisions of our schools. As a result, there was little continuity in the experiences of pupils moving up the educational ladder and transferring from one division of the schools to another. This lack of continuity or articulation was observable in the content of the subjects taught as well as in the methods of teaching.

During much of the nineteenth century development, the central educational problem of growing communities had been one of housing increasing school populations. With few exceptions, efforts to solve educational problems of an instructional character were restricted to the organization of schools into grades. Until the latter part of the century little attention was given to the adequacy or the effectiveness of the instruction offered. During the latter quarter of the century however, discriminating educators were becoming increasingly aware of internal weaknesses in American education.

Movement for Reorganization—In an address before a meeting of the Department of Superintendence of the National Education

Association in 1888, President Charles W. Eliot,¹ of Harvard University, questioned the effectiveness of the prevailing school plan. In this address and in a subsequent one in 1892, President Eliot pointed out that at eighteen, graduates of French secondary schools were materially in advance of graduates of American high schools. He pointed out that the inferiority of the American high school resulted from time wasted in the elementary school in long drills in arithmetic, grammar, and geography and from inferior methods of instruction. He also emphasized the need for shortening the elementary-school program, eliminating useless and irrelevant materials, and enriching the program by introducing natural science, mathematics, and foreign languages.

These addresses stimulated much thought and discussion among educational leaders and led to the reorganization of instruction in the upper grades of many schools. Some changed from the grade-teacher plan to a modified departmental type of instruction. Some schools even introduced elementary algebra, geometry, science, and Latin or modern foreign languages in the seventh and eighth grades. As an example of such early modifications, Heironomus² describes the construction of a new school building to house the seventh and eighth grades at Richmond, Ind., in 1895. This school used the departmental plan of instruction, substituted modified algebra for review arithmetic, employed specially trained teachers in music and in art, offered courses in practical arts for both boys and girls, and, according to Heironomus, introduced some form of homeroom guidance.

The Committee of Ten—In 1892, the National Council on Education appointed a committee of ten members to study each of the principal subjects included in the secondary-school program. As a part of their study, the committee recommended that several subjects reserved for high schools should be begun in the schools classified as elementary or, as an alternative, that the secondary-school period should begin two years earlier, thus leaving six years instead of eight for the elementary school.

Committee on College Entrance—Similar changes were recommended by the Committee on College Entrance Requirements of the National Education Association, which reported in 1899. In this

¹ ELIOT, CHARLES W., *Educational Reforms*, 418 pp., D. Appleton-Century Company, Inc., New York, 1898.

² HEIRONOMUS, N. C., "Is This the Earliest Known Junior High School?" *The Clearing House*, Vol. 14 No. 9 pp. 518-519, May, 1940.

report, the six-year elementary school and six-year high school were suggested, with the seventh grade rather than the ninth as the first year of high school. The position of the committee may be better understood from the following portion of their resolution hearing on this problem

The most necessary and the most far reaching reforms in secondary education must begin in the seventh and eighth grades of our schools. Educators agree that these grades must be enriched by eliminating non-essentials and adding new subjects formerly taught only in the high school. These reforms require the highest pedagogic knowledge and the most efficient supervision. In our opinion these problems can be solved most quickly and surely by making the seventh and eighth grades parts of the high school under the immediate direction of the high school principal.

The seventh grade, rather than the ninth, is the natural turning point in the pupil's life, as the age of adolescence demands new methods and wiser direction. Six elementary grades and six high-school, or secondary, grades form symmetrical units. The transition from the elementary to the secondary period may be made more natural and easy by changing gradually from the one-teacher regimen to the system of special teachers, thus avoiding the violent shock now commonly felt upon entering the high school.

The inspiration afforded by a well equipped high-school principal and by a special teacher in language, science, mathematics, would do much to retain desirable students in the high school, thus raising the educational standard of American citizenship. As far as statistics are accessible on this point, the experiment of placing these grades in the high-school building has been successful, resulting in better scholarship and a greater percentage in the number of students entering the ninth grades.¹

The Committee of Twenty-one —Further recognition of the need for reorganizing the schools resulted from conferences held under the leadership of President William Rainey Harper and Prof. John Dewey, of the University of Chicago. President Harper recommended that the work of the eighth grade of the elementary school be connected with that of the secondary school, that the secondary school include the first two years of college work, and that the seven years thus grouped together be reduced to a six year course. He recommended further the appointment of three committees of seven to consider the problems of the elementary school, the secondary school, and the college, and the constitution of these committees.

¹ NATIONAL EDUCATION ASSOCIATION, *Addresses and Proceedings*, pp. 659-660, 1899.

into a joint committee of twenty-one for further study. This committee reported in 1903, favoring the adoption of the plan proposed by President Harper.

Other Committees.—The department of secondary education of the National Education Association appointed a standing committee on six-year courses that made recommendations in 1907, 1908, and 1909. Further studies of this problem of reorganization were made by the Committee on Economy of Time of the National Council of Education, whose final report was made in 1913. This report emphasized a need for including in the curriculum only the most important subjects and topics and stressed the principle that education could best be accomplished by doing a few essential things well. The report pointed out the need for relating subject materials to modern life and to pupil interests and abilities, and, further, it emphasized the need for moral training and the preparation for citizenship as a part of elementary-school instruction. In this final report, Henry Suzzallo recommended the division of the new six-year secondary school into two administrative units, a junior high school and a senior high school.

It should be noted that the membership of the various national committees consisted largely of subject-matter specialists whose major interests and experiences centered in higher education. It was natural that their solutions for problems of the public schools should have been highly colored by their belief in the efficacy of college training. In each committee report there was a slight but nevertheless growing recognition of the basic problems that must be faced by the public schools. However, the reorganization emphasis was placed upon efficiency in the elementary school in order that pupils might be ready to begin high-school subjects earlier and hence be prepared earlier for college. For the most part, the acquisition of skills, tools, and factual information was given greater consideration than were factors relating to the personal developmental welfare of pupils.

Problems of Articulation.—It has been noted above that each of the three divisions of our schools evolved quite independently. The elementary schools grew from widespread public demands for universal training in the fundamental tool and skill subjects. The colleges, with their roots in the medieval universities, provided professional training, and the high schools arose in a middle ground to satisfy a popular demand for practical, technical, and vocational training. In some measure the high-school programs

were built upon the foundations of the elementary school, and in later years, the college dictated their curricular offerings. But for the most part, persons pursuing studies in first one division and then in another experienced a distinct break in the continuity of their development with regard to the subject content, the aims, and the methods employed. Pupils graduating from the eighth and entering the ninth grade changed from the grade-teacher plan to an impersonal departmentalized-study plan with extreme abruptness. High-school methods of instruction tended to imitate collegiate methods. Many high-school textbooks were written by college professors and were little more than condensed or abbreviated college texts, with comparatively little recognition of the interests, needs, or abilities of high-school pupils. Particularly noteworthy in this regard were the unreasonable vocabulary demands made by early high-school textbooks. The formalized lecture method of instruction was common and highly ineffectual, since many high-school teachers did little more than review lectures that they themselves had heard and perhaps imperfectly understood.

In general under the departmentalized plan of instruction particularly in traditional college-preparatory high schools, it was assumed, consciously or unconsciously, that all pupils could read and understand the English language with equal facility, that they had the work habits and interests of scholars, that if they failed to master their assignments they probably were not worth educating and had best drop out of school. Academic accomplishment was regarded so highly that other aspects of education tended to be neglected even though many teachers might have preferred to give more attention to the personal and social welfare of pupils. Such attitudes, with their concomitant practices, ignoring as they did the basic facts of individual differences, inevitably resulted in a high proportion of failures during the first year of the high-school course.

Surveys of Attendance—The magnitude of the school mortality under these conditions during the first decade of the twentieth century was startlingly revealed by three surveys of school populations. The first of these was reported by Thorndike,¹ who studied the school systems of 23 cities having populations of 25 000 or more. In this study only 51 per cent of the average number of pupils who enrolled in grades 1 to 3 were in grade 7, 37 per cent of this number were in grade 8, and 27 per cent were still in school in grade 9.

¹ THORNDIKE, E. L. The Elimination of Pupils from School. *Bulletin 4* pp 1-63 U S Office of Education, 1907

In a study of the school populations of 59 cities, Ayres¹ found that 71 per cent of the average number of pupils who entered grades 1 to 5 were still in school in grade 7, 51 per cent of this number were in grade 8, and 40 per cent were in school at the beginning of grade 9. In an even more comprehensive survey of school populations in 319 cities, Strayer² found that of the average populations of the first three grades, 63 per cent were in the seventh, 51 per cent were in the

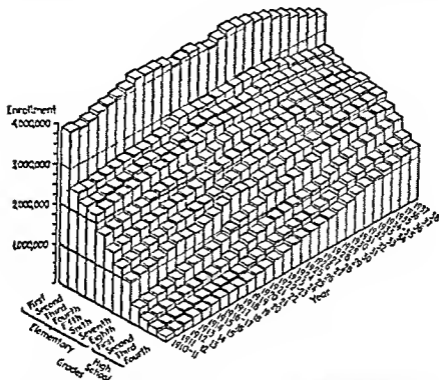


FIG. 3—Grade enrollment, public elementary and secondary schools (Reproduced from Foster, Emory M., "Grade Enrollment in the Public Schools," *School Life*, Vol. 26, No. 1, October, 1940)

eighth, and 39 per cent were in the ninth grade. These investigations were made in different school systems and together constitute a fairly adequate sampling of prevailing conditions. The findings are summarized in Table I. In general, these investigations indicated that between one-third and one-half of the total number of elementary school pupils had dropped out of school by the end of the

¹ AYRES, L. P., *Laggards in Our Schools*, p. 55, Charities Publication Committee, Russell Sage Foundation, New York, 1909

² STRAYER, G. D., "Age and Grade Census of Schools and Colleges," *Bulletin 5*, pp. 1-145, U. S. Office of Education, 1911.

seventh grade and that between two-thirds and three-fourths had dropped out before entering the first grade in high school

TABLE I—PERCENTAGE OF ELEMENTARY SCHOOL PUPILS ENTERING GRADES 7 TO 9 AS SHOWN BY THREE SURVEYS*

Reported by	Grade 7	Grade 8	Grade 9
Thorndike	51.5	37	27
Ayres	71	51	40
Strayer	63	51	39

* THORNDIKE, E. L. "The Elimination of Pupils from School" *Bulletin 4* pp 1-63 U S Office of Education, 1907. AYRES, L. P., *Leggards in Our Schools* p 55 Charlities Publication Committee, Russell Sage Foundation, New York, 1909. STRAYER, O. D. *Age and Grade Census of Schools and Colleges* *Bulletin 5* pp 1-143 U S Office of Education 1911

Inadequacy of the School Program.—The failure of pupils to continue in school may be accounted for in part by the poor articulation between the elementary and secondary divisions, in part by inappropriate teaching methods in the high school, and in large measure by the impractical narrow, classical college-preparatory curriculum that in many cases had come to be the only program offered. Unless pupils were interested in college preparation, there was little relationship between the secondary-school studies and any later activities that they might follow. There was a marked separation of all secondary work from the actual community and occupational life of the time. Graduates of the traditional high schools were not prepared to enter into commercial activities, nor were they well adjusted to the changing social and economic conditions. Thus for the large majority of pupils entering the ninth grade for the first time, the subjects themselves and the possible application of those subjects proved a discouraging disillusionment. With ineffectual compulsory-attendance legislation and with plentiful jobs as an alternative to the uninteresting and unsuitable high-school course of study, it is little wonder that large proportions dropped out of school at the first opportunity.

Probably one of the most significant factors causing pupils to drop out of school during grades 7 to 9 was the failure of educators to understand pupils and their adjustmental needs during the periods of pubescence and early adolescence. Because of physiological changes and of associated differential-growth patterns, the prediction of future abilities and success is exceedingly difficult. A generation ago, teachers were almost wholly unappreciative of these

factors and often encouraged pupils to drop out of school and go to work, when, had they continued in school during this period of emotional turmoil and erratic growth and development, some might have later achieved scholastic or professional distinction.

Recognition of Individual Differences.—A further factor in the movement for the reorganization of the schools was the growing recognition of the significance of individual differences among children. Although for many centuries people had been vaguely aware of the fact that not all persons were alike, the schools had been conducted on the apparent assumption that all pupils could accomplish the same work even though some might take longer than others to accomplish the same task. With the beginning of the mental-testing movement and with the more adequate understanding of the nature of intelligence by psychologists and educators, it became increasingly apparent that this was not the case. It became increasingly clear, for example, that traditional practices of acceleration and retardation needed supplementing if the schools were to provide adequately for individual differences.

The work and influence of such men as G. Stanley Hall in the field of adolescent psychology, and J. McKen Cattell and Edward L. Thorndike in the field of individual differences, and, in fact, the influence of the entire growing child-study movement were in the direction of furthering appreciation of the significance of individual differences.

Supporting Factors.—Certain background conditions contributed in no slight way to the reorganization of the schools. Among factors of this kind should be noted the continued growth of the West, the continued movement toward urbanization, and the growing popular demand for universal secondary-educational opportunities. In rapidly growing communities additional schoolhouses were needed from time to time to house the growing school population. After the proposal had been made to create the six-year secondary school, it was comparatively easy to house grades 7 to 9 in a separate building, so long as a new building had to be constructed in any event. It was this combination of circumstances that in part led to the establishment of the first junior high schools and that furthered their rapid expansion in the growing cities of the nation.

EARLY DEVELOPMENT OF THE JUNIOR HIGH SCHOOL

In an effort to remedy the more glaring defects observed in the schools, more or less extensive modifications of elementary and

secondary schools were made during the years following the several national committee reports. In reality, such changes should be considered the initial stages or steps of the junior high school. Usually, however, the continuous development of the junior high school as such is traced from the California reorganization effected in 1910.

The First Junior High School—Probably the first junior high school organized in the United States was in Berkeley, Calif., in 1910. This reorganization of the Berkeley schools was based upon a report made to the Berkeley Board of Education by Superintendent Frank F. Bunker in 1909. Since this report exerted considerable influence over the organization of other junior high schools in California, as well as in other states, it occupies a place of historical significance in the junior high-school movement. The plan and purposes of this new school unit can best be presented by the following excerpts from Superintendent Bunker's report:

The plan which I recommend involves a reorganization and a regrouping of the several grades of our schools.

Stated briefly, it is this: to have three groups of schools, one group (the High School Proper) to comprise the tenth, eleventh and twelfth years only; the second group, which may be called the Introductory High School group, to comprise the seventh, eighth and ninth years only; and a third group of schools (the Elementary Schools Proper), to comprise all children of the first six years.

To make it more concrete, the plan proposes, when in full operation, that all the seventh, eighth and ninth grade children of the entire department be assembled at certain schools which shall be organized for work suitable for them; that work of the ninth year be no longer done at the High School Proper, but at these centers; and that the other schools of the department comprise grades no higher than the sixth grade, the same to be feeders to the centers.

In short, the plan proposes a redistribution of children among our several schools in order to lessen the congestion in the High School Proper.

An examination of this plan will convince one, I think, that the division of the grades into three groups is a much more natural one than the arrangement under which we are now working with a division of the grades into two groups only: one group comprising the eight elementary years and the other group the four upper years.

Statistics show that the masses are held in school no longer than through the fifth grade, and that at the close of the fifth grade they drop out in very large numbers, which means educationally, that whatever is to be taught to the masses must be given in the first five or six years. By making

the break come at the close of the sixth year the tendency will be to hold the children in school at least one year longer .

In the Introductory High Schools there would be congregated the seventh, eighth and ninth years . These years comprise another natural group, inasmuch as children would enter it at the beginning of the period of adolescence, when by nature they crave an opportunity to dip into a wide range of subjects and activities, which is Nature's way of insuring freedom of choice in determining occupation and of exercising somewhat of intelligence in the same .¹

The first unit of the new Introductory High school was opened in the fall of 1910 at McKinley School, Berkeley, Calif., under the principalship of Charles L. Biedenbach.

At approximately the same time, influenced by the same factors and committee recommendations that had been influential in the Berkeley reorganization, there was a movement for the reorganization of the schools in Columbus, Ohio . This plan closely paralleled the changes suggested by Superintendent Bunker and those embodied in the national committee reports, with the exception that instead of using the name Introductory High School, the new unit in Columbus was called the Junior High School . There has been some dispute over the question of whether Berkeley or Columbus deserves the credit for establishing the first junior high school . The evidence seems to indicate that although the Berkeley plan got under way somewhat earlier during the year 1910 than did the Columbus plan, the first use of the term "junior high school" was made by Columbus.

Growth of the Junior High Schools—Closely following the Berkeley and Columbus developments, Los Angeles organized a similar school in 1911, and although many schools reported some modified form of elementary- and secondary-school programs during the years 1911 and 1912, Berkeley, Columbus, and Los Angeles are generally considered the pioneers in the junior-high-school movement.

Once the junior high school had gained an initial foothold, it spread with extreme rapidity . Its remarkable growth suggests that it has met a distinct educational need as a separate administrative unit in the American plan of education . Its curve of growth by four-year periods is presented in Fig. 4 . It should be noted that this curve represents the total number of separate junior high

¹ BUNKER, FRANK F., *The Junior High School Movement Its Beginnings*, p. 3, W. F. Roberts Company, Washington D. C., 1935.

schools, six-year junior-senior high schools, and undivided high schools.

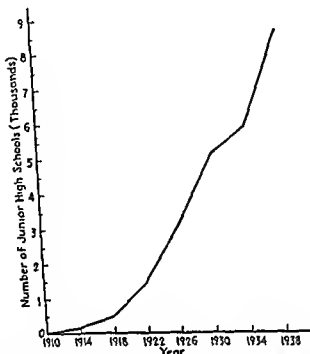


FIG 4—The growth of junior high schools in the United States, 1910-1938 (Data from *Biennial Survey of Education, 1929-1930, 1937-1938*, U. S. Office of Education.)

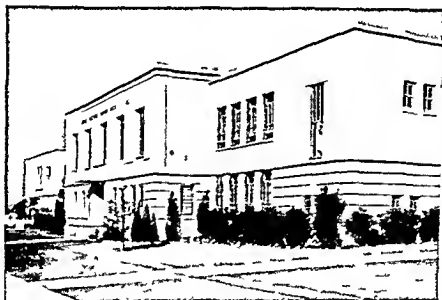
Summary of Early Purposes.—The purposes of the first junior high school were well stated in the report of Superintendent Bunker.¹ In 1926, after 15 years of growth, Smith analyzed and summarized the purposes of the junior high school as these had been advanced by leaders of the movement. Smith's summary of these early purposes is as follows:

- I To provide a suitable environment for children of approximately twelve to sixteen years of age, embracing
 1. An enlarged experience background involving especially
 - a. enriched curricula and courses of study
 - b. improved facilities by way of laboratories, shops, libraries, assembly halls, gymnasiums
 - c. superior teachers including a larger percentage of men
 - d. new methods of teaching and social control
 - e. a distinctive school atmosphere

¹ *Ibid.*, p 3



One of the first junior high schools McKinley School Berkeley Calif (Photograph courtesy of public schools Berkeley Calif)



A modern junior high school Los Angeles Calif (Photograph courtesy of public schools Los Angeles Calif)

- 2 Ample provisions for the common socialized integrating education
 - 3 Abundant facilities for the progressive discovery and experimental direction of pupil's interests, aptitudes, and abilities involving especially
 - a exploring activities in varied occupation fields
 - b general and survey courses in academic fields
 - c individual and social diagnoses
 - d flexibility in curriculum organization and administration
 - e educational and vocational guidance
 - 4 Adequate provision for individual differences, involving especially
 - a enriched curricular and extra-curricular offerings
 - b opportunities for gradual curriculum differentiation
 - c flexibility in methods of promotion
 - d provision for varying rates of progress
 - e vocational training for those who must leave school early
 - 5 Increased opportunities for genuine socialization, involving especially
 - a an adequate program of extra-curricular activities
 - b extensive provision for pupil participation in school government
- II To democratize the school system through
- 1 Provision for a gradual transition from elementary to secondary education in such matters as
 - a content
 - b methods of teaching
 - c social and administrative control
 - 2 The democratization of educational opportunities
- III To effect economy of time in education, largely through
- 1 The elimination of waste from the seventh, eighth, and ninth grades¹

THE JUNIOR HIGH SCHOOL TODAY

Considerable variance is found in the number of grades included within the separate school units conducted as junior high schools. The number of schools organized according to various plans, together with their total enrollment, is presented in Fig 5. From this figure, it is apparent that the most popular plan of organization is the three-year junior high school, including grades 7 to 9.

In a report on the reorganization of secondary education, Spaulding, Frederick, and Koos summarized trends up to 1930 as follows:

The movement for secondary-school reorganization among schools for white pupils has produced a wide variety of special types of grade grouping.

¹ SMITH, W. A., *The Junior High School*, pp. 203-204, The Macmillan Company, New York, 1926.

The great majority of reorganized school systems have adopted either a 6-3-3 or a 6-6 plan of organization, with occasional use of the 6-2-4 plan. Present tendencies increasingly favor 6-3-3 and 6-6 plans. The grade combinations under these plans have resulted in three major types of reorganized schools: Separate junior and senior high schools, undivided 6-year schools, and combined junior senior high schools. The latter represent a compromise between the first two types, providing for a distinction between junior and senior units, yet allowing the administration of both units within a single school.

Reorganized schools for white pupils enrolled in 1929-30 approximated one-third of all such pupils enrolled in grades 6 through 12. Elementary

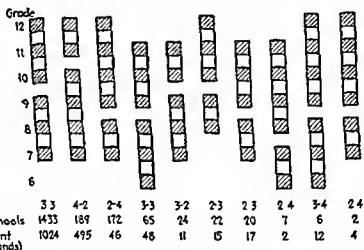


FIG. 5.—Distribution of number of junior high schools and enrollments by types of organization. (Data from *Blose David T. and Jessen Carl A. Statistics of Public High Schools 1937-38 Bulletin 1940 No. 2 Chap. V Federal Security Agency U. S. Office of Education 1940*.)

schools and conventionally organized high schools accounted for the remaining two-thirds. Of the total number of individual secondary schools, reorganized schools constituted one-fourth. The pupils attending reorganized schools comprised nearly half the total secondary school enrollment. Both the total number of reorganized schools and the relative numbers of pupils enrolled in such schools have increased markedly since 1925-26.

In the proportion of its secondary-school pupils enrolled in reorganized schools New England ranked first in 1929-30, the Western, Middle Western, and Middle Atlantic States fell next in order, the Southern States were last. Among the major types of reorganized schools in existence throughout the United States junior-senior and undivided 6-year schools were more numerous than separate junior and senior high schools. Recent tendencies have been in the direction of an appreciable increase in the number and total enrollments of each of the principal types of schools. There have been

especially marked increases in the case of undivided 6-year schools. In spite of the numerical importance of combined schools and the striking increase in the number of 6-year schools the majority of reorganized school pupils in 1929-30 were enrolled in separate junior and senior high schools.

Data gathered in 1930 show that most reorganized schools are relatively large schools as compared with conventionally organized schools. With the exception of 4-year junior high schools, separate junior and senior high schools tend in the main to be city schools. Junior-senior high schools are found predominantly in small communities and communities of moderate size. Undivided 6-year schools and 4-year junior high schools are typically rural and village schools. Changes in the average sizes of the combined schools and the 4-year junior high schools between 1925-26 and 1929-30 indicate a growing downward extension of the movement for reorganization. As judged by the growth in the numbers of small reorganized schools, rural and village communities are tending in increasing measure to abandon the conventional high-school organization.¹

The growth of junior high schools seems to be in the direction of the 3-3 junior-senior 12-grade plan of organization, compared with the three-year separately administered junior high school. In 1930 there were 1,288 separately administered junior high schools including grades 7 to 9. In 1934 there were 1,394, or an increase of 106 schools of this type. In 1930 there were 936 junior-senior high schools including grades 7 to 9, and in 1934 there were 1,222 schools of this type, or an increase of 286 over the four-year period. It is possible that this statistical picture is somewhat misleading, since many of the more recently organized junior senior high schools are in small communities where the deciding factor may have been practical economy rather than effectiveness of organization.

It must not be supposed that all schools that have effected reorganizations in the grouping of grades or in the administration of the school have put into practice the major internal procedures recommended by leaders of the reorganization movement or even those found experimentally to be the most effective and desirable. Indeed, considerable variance is observable among different types of school organization with respect to the effectiveness of their educational procedures. Some reorganized schools follow conventional practices, and many regular four-year high schools are accomplishing desired results. The seventh- and eighth grade programs of some eight-year elementary schools apply the principles of junior-

¹ SPAULDING FRANCIS T. FREDERICK O. I. and KOOS L. V. The Reorganization of Secondary Education, *Bulletin 17, National Survey of Secondary Education, Monograph 5*, pp. 57-58, U. S. Office of Education, 1932.

high-school education, whereas the programs of some so-called "junior high schools" are far below what should be expected of them. A note of caution should therefore be introduced before accepting the total statistical picture as indicative of the present status of junior high-school education.

Definitions of the Junior High School—From the foregoing discussion of the variability of types of organization, character of instructional programs, and outcomes of regular and reorganized secondary schools, it must be apparent that a rigorous functional definition of the junior high school would prove difficult to formulate.

In his discussion of the definitions, aims, and functions of the junior high school, Pringle points out this difficulty but offers the following tentative statement: "The junior high school is an organization of the seventh, eighth, and ninth grades into an administrative unit for the purpose of providing instruction and training suitable to the varied and changing physical, mental, and social natures and needs of immature, maturing, and mature pupils."¹ Pringle suggests four functions of the junior high school:

- 1 The recognition of the nature of the pupils, including their individual traits, capacities, and needs, and the discovery of tendencies and habits of the more important groups as such
- 2 The retention of pupils in school
- 3 Economy of time
- 4 Exploration and guidance²

The function of retaining pupils in school is included in most early statements of the purposes of the junior high school. Today, in the light of modern practices and trends of compulsory school attendance, this function would seem to have been met by means other than that of creating a special school for the purpose.

The function of economy of time, as originally stated by President Eliot, was intended to shorten the period of college-preparatory training and to increase the efficiency of the total school program. In view of the nature of the present junior high-school population—that is, its wider variability of talent and the greater proportion of pupils who will not attend college—and in view of the ever lengthening preparatory period for youths planning to enter either industry or the professions, it would seem that shortening this preparatory period, like retaining pupils in school, no longer should be considered

¹ PRINGLE, RALPH W., *The Junior High School*, p. 68, McGraw Hill Book Company Inc., New York, 1937.

² *Ibid.*, pp. 73-83.

a necessary function of the junior high school. The concept of "economy of time" then may apply only with reference to the efficiency and suitability of methods of instruction, of curricular adaptations and enrichments. A direct statement of this function is preferable to the now misleading caption "economy of time."

It is the philosophy of the authors of the present treatment of junior-high-school education that exploration and guidance are not functions of the junior high school in the sense in which the term "function" is used synonymously with the terms "aim," "purpose," or "objectives." In any consideration of purpose or function, it is important to distinguish between ends and means. This is particularly important here for the reason that the means of education are commonly confused with the ends of education. Properly, *exploratory experiences are intended to contribute to the development of pupils.* They are means, not ends in themselves and hence should not be considered functions of the junior high school. Similarly, *guidance services in junior high schools are ways of furthering pupil adjustments.* Guidance activities are means. Wholesome personalities are ends. Guidance should be distinguished from adjustment, if for no other reason than that often guidance does not result in adjustment.

In view of the wide variability found in the number of grades, the particular combination of grades, and the outcomes of instruction under various structural plans of organization, it seems obvious that combinations of grades are not the crucial factors in junior-high-school education. Indeed, the external form of organization of any division of our schools can have little influence over the educational outcomes unless appropriate changes also are made in the internal administration of the school. These internal changes involve the objectives, the principles, the procedures, and, in fact, the total program of studies appropriate to that division.

Unique aspects of junior-high-school education then must be found embodied in the nature of junior-high-school pupils and in the internal administrative and instructional procedures of the school rather than in its external form alone. This should be especially clear since, as we have already pointed out, many school systems retaining the conventional 8-4 plan of organization have adopted the principles of modern junior-high-school education with better outcomes than are to be found in other schools that are reorganized as junior high schools but that have failed to catch the true spirit of the junior-high-school idea.

Unique Functions of Junior-high-school Education.—Since junior high schools may not be defined in terms of any specific grade organization, and since the majority of pupils of junior high-school age are likely to continue in schools organized under the traditional 8-4 plan, attention should be directed to the crucial problem at issue, namely, the kind of education that should be provided for children who are approaching or have entered various phases of pubescent and adolescent development

Elementary schools, junior high schools, and senior high schools all share the ultimate objectives of general education. The unique contributions of education to children of junior high-school ages should therefore be considered in relation to a general definition of education and a statement of the ultimate objectives of education. One such definition is that "education is the total procedure of reciprocating responses by which the best possible personality and institutional progress are achieved"¹ A logically comprehensive statement of the ultimate objectives of education as formulated by the Department of Superintendence of the National Education Association is as follows

- 1 To promote the development of an understanding and an adequate evaluation of the self
- 2 To promote the development of an understanding and an appreciation of the world of nature
- 3 To promote the development of an understanding and an appreciation of organized society
- 4 To promote the development of an appreciation of the force of law and of love that is operating universally²

The junior high school or, more broadly, junior high-school education may and should contribute uniquely to the realization of the ultimate objectives of education, namely, achieving the best possible personality and institutional progress by providing a *suitable school environment* for children of junior high-school age that will enable them (1) *to understand and appreciate themselves* in relation to the physical, economic, social, and spiritual aspects of the world in which they live, and (2) *to develop themselves* harmoniously in relation to their abilities and needs

¹ From the unpublished lectures of the late Prof. Charles E. Rugh of the University of California, Berkeley, Calif.

² NATIONAL EDUCATION ASSOCIATION, DEPARTMENT OF SUPERINTENDENCE, *The Development of the High School Curriculum, Sixth Year Book*, pp. 51-54, 1923.

The realization of these two objectives of junior-high-school education involves specifically.

- 1 Providing differentiated objectives, procedures, and experiences adequately adjusted to the abilities, interests, and needs of pupils as these have been conditioned by unique biological and environmental factors in their lives. Such differentiations must be predicated upon the following:
 - a. Discovering and understanding the pervasive psychobiological individual differences associated with pubescence
 - b. Discovering, understanding, and appraising pupil achievements, adjustments, abilities, interests, and developmental needs
 - c. Discovering and understanding the nature of the cultural, social, and economic factors, influences, and conditions in the backgrounds and environments of pupils
- 2 Developing emotional stability and maturity, including appropriate and satisfactory social and heterosexual attitudes
- 3 Promoting an understanding and appreciation of the cultural heritage of the race through direct as well as through vicarious pupil experiences. This involves providing extensive and appropriate exploratory experiences in academic, occupational, and avocational fields
- 4 Developing an adequate mastery of the fundamental tools and skills of learning, communication, and construction. This involves especially the development of optimal skill in the following:
 - a. Reading, writing, and speaking
 - b. Seeing, hearing, and appraising varied lectures, addresses and programs presented personally and through the medium of the radio and cinema
 - c. Manipulating arithmetical and other quantitative symbols and
 - d. Manipulating the common mechanical tools of everyday life
- 5 Developing appropriate habits and attitudes of personal and civic responsibility and efficiency. This involves particularly developing efficient habits of socialized personal living, as well as those of work and study, both independently and in groups
- 6 Preparing selected pupils for more advanced study in academic departments of senior high schools as a part of college preparatory study

The Principle of the Continuity of Experience—Meaningful pupil experiences are continuous. New developmental experiences must necessarily be based upon familiar ones. In theory this principle has been accepted since Herbart's initial formulation. In practice it is often ineffectively implemented. Each school grade should be predicated upon the experience of pupils in preceding grades. Each division of our school should be intimately related to the total pupil experiences provided in the next lower division. Ideally, the relationships among all administrative divisions of our schools should be so close that pupils will experience no disruption in the continuity of their learning in transferring from one division

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to another. After all, seventh-grade pupils in junior high school are only three months older than they were as sixth-grade pupils in elementary schools, and these three months have been vacation months of forgetting.

The principle of the continuity of experience implies that the functions and objectives of the junior high school as well as the selected means for implementing these objectives must be closely articulated with the objectives and means of the elementary school and with those of the senior high school.

SUMMARY

American education has evolved through varied stages and procedures of change and experimentation to meet changed religious, industrial, political and social conditions observable at different periods of our colonial and national history. Colonial schools were established to meet articulate demands of dominant groups in the several colonies. Transitional changes in the form and functions of the schools were made in response to changing ideals, conditions, and needs.

Elementary, secondary, and higher divisions of education evolved independently without underlying integrating principles to guide their development and evolution. This independent development tended toward the establishment of separate schools for the masses and for the classes similar to those in European countries. In time the influence of American democracy led to the establishment of a single-track ladder plan of education open to all children. Later the prestige of the traditional classical, humanistic higher education tended to dominate secondary education even in the public high schools, with the result that these "people's colleges" failed to meet the needs and interests of many of those attending.

Throughout the evolutionary development of American education, certain principles have been continuously dominant. Among these should be noted (1) the principle of local control, (2) the principle of separation of the church and state, (3) the principle that the state should provide universal, free, tax-supported public education, and (4) the principle of change in response to changing conditions and educational needs.

The nineteenth century growth and expansion of America created many new educational problems. Affecting education were (1) the rise of manufacturing, (2) the large population increases from European immigration, (3) the rapid growth of cities, and (4) the exten-

sion of the suffrage. Together these factors created unprecedented problems of inequality of educational opportunity and rendered obsolete the old district form of school organization. The struggles to solve these problems and to create universal free tax-supported nonsectarian public schools followed several phases or lines of development, namely, to secure tax support, to eliminate the pauper school idea, to make the schools entirely free, to establish state supervision, to eliminate sectarianism, to extend the system upward, and to include the addition of the state university to crown the system.

Toward the close of the nineteenth century, the American plan of providing education at public expense in graded schools extending from the first grade through the university clearly had been established. Attention shifted gradually from the problems of housing increasing school populations to problems of instruction and internal administration. Defects were observed in the plan of education that had been created. Public awareness of these defects was furthered through the addresses and writings of educational leaders, through committee reports of the National Education Association, and through the findings of school surveys. These reports and surveys emphasized the fact that the weakest part of the established plan of education was centered in the programs of grades 7 to 9.

Growing out of several years of agitation and planning, junior high schools were established to correct the weaknesses of the traditional school organization and to provide more efficient and effective instruction for children of grades 7 and 8 or 7 to 9. Credit for establishing the first junior high school usually is given to Berkeley, Calif., although it is likely that this distinction should be shared with other cities.

Since 1910, the junior high school has experienced a rapid growth in popularity and now serves approximately one-third of the total pupil school population of grades 7 to 9. Current trends indicate a continuing and even more rapid increase in the number of junior high schools.

Definitions of the junior high school in terms of grade organization are found to be inadequate. Under modern school conditions at least two of the functions for which junior high schools were established are found to be obsolete: (1) the retention of pupils in school and (2) economy of time in the sense of shortening the elementary and secondary training program.

Today educational emphasis is being directed toward the formulation and implementation of a program of studies suitable to

children of junior-high-school age, whether they are in reorganized junior high schools, in eight-year elementary schools, or in conventionally organized four-year high schools. Such programs are intended to achieve objectives of junior high-school education as steps toward the realization of the ultimate objectives of general education.

Accordingly, the emphasis of the present volume is directed toward the broader concept of junior-high-school education rather than toward the junior high school as a separately administered unit of the schools. Succeeding chapters present in some detail (1) the physical, mental, social, and emotional characteristics of children of junior high-school age, together with significant environmental factors affecting them, (2) the adjustment of pupils as the central problem of junior high-school education, (3) the nature and function of the total instructional program as a means of achieving objectives of junior high school education, (4) the administrative procedures that further the realization of the objectives of junior-high-school education, (5) the nature of the school environment most conducive to the development of pupils of junior-high-school age, and (6) some probable future trends in junior-high-school education.

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PART I

The Junior-high-school Age: Its Characteristics

CHAPTER II

PHYSICAL GROWTH AND DEVELOPMENT

The characteristics of children of junior-high-school age may be studied from various points of view. Present trends in the child-study movement emphasize the need for an understanding of the whole child. This, however, is an ideal that may be attained only from years of study resulting in an appreciation of relationships among factors affecting children as they live and grow in their usual home, school, and community environments. In an introductory treatment of the characteristics of junior-high-school children, it would seem advantageous to follow some modified analytical approach rather than to attempt a study of the whole personality of the whole child.

In the present treatment, therefore, children of junior-high-school age are described in terms of their physical growth and development, their mental growth and development, and their social and emotional growth and development. These three aspects of personality have been selected not because they are the only important ones but because development in these areas is considered within the unique province of the school. But since we may study children only in some social, physical, and psychological habitat, social and emotional development is related to certain background factors in order to emphasize the relational interdependence of facets of personality upon one another and upon environmental forces.

THE NATURE OF GROWTH

Observations of the physical development of children of junior-high-school age suggest that the one dominant characteristic of this period is the variability of growth in height, weight, physical proportions, strength, and motor coordination, together with the variability in related and associated areas of development. At no other stage during the entire developmental process from infancy to maturity does physical growth seem to exert so marked an influence over the entire personality as during this critical period of development. During the period of pubescent and adolescent growth, the

child's old familiar body becomes the new unfamiliar body of an adult. The adequacy and the relative rate of this development in large measure determine the esteem and respect of the child's group and both solve and create many adjustmental and behavioral problems.

Physical growth may be defined as the increase in the size and proportions of the various structures of the body in their movement toward adult status. Physical growth involves considerably more than mere increment in height and weight. In addition, it involves changes in the structural proportions of the body, changes in glandular function, and it involves the chemical and nutritional balances and deficiencies, as well as the physical and psychological stresses associated with the differential growth of bodily parts. The processes of growth involve an unfolding of the hereditary potentialities and patterns influenced by continual interaction between the organism and environmental forces and conditions. Physical-growth status may not be interpreted apart from these influences.

Maturation and Development through Activity—Three complementary causal influences produce the growth of the body. The first of these is maturation, the second is the environment, and the third is the functional activity of the organism itself.

Hereditary potentialities are determined at the moment of the fertilization of the ovum. The mysterious, imperfectly understood hereditary forces very early begin a differentiation of cell function, and under normal environmental conditions, maturation stimulates normal growth. Maturation determines the nature of the basic structures of the organism, as, for example, the number of fibers in a muscle and serves the purpose of making the organism ready to respond to its environment. Certain major influences of maturation are completed during the embryonic period. During pubescence, however, a kind of physical metamorphosis takes place that may be explained only by maturation. It is the nature of these changes that concerns us here. These physical changes are basic in the biological organization of the individual and as such may be classed among the most powerful drives of human behavior.

Growth, considered as development through activity, involves forces other than maturation that produce physical changes in the individual. Exercise, use, and activity serve to strengthen and develop body parts after maturation has caused them to grow to an appropriate stage of maturity. The fact that maturation must proceed to a certain stage before activity or tuition may exert

optimal influence is of importance in studying maturing children, since it suggests that the optimal development of children must be based upon school programs and experiences that have been selected and differentiated in accordance with maturational or physiological stages of development. Conversely, this fact suggests that when maturation has proceeded to a mature stage, developmental experiences appropriate to an earlier period are likely to prove ineffectual. Thus when pupils differing in physiological status but otherwise relatively equal are placed in the same classroom situations, some will find the experiences stimulating and will profit from them, whereas others are likely to be either bored or unchallenged. In these and in many other ways, the facts of growth have far-reaching and significant implications for all aspects of junior-high-school education.

The Unevenness of Growth.—From conception to physical maturity, individual growth is characterized by unevenness. Seldom, if ever, do we find a regular, even increase in size. Enormous differences in the velocity of growth are observable at different stages of development. The greatest increases in size occur in the fetus during the last month of prenatal existence. During the first year of life the rate of increase falls rapidly, and from the second year to the end of the first decade the velocity of growth is decelerated and the process fairly continuous.

Certain major trends are observable in the rates of growth of various parts of the body among normal healthy children. Although superficial physical examinations are not likely to detect specific minor individual deviations in growth of special parts, a general understanding of the relative maturity of parts of the body during different stages should help teachers interpret the physical development and the behavior of pupils.

When growth increments for the body as a whole and for different organs and parts are recorded as percentages of total growth to maturity, they yield comparable relative-growth curves for the body as a whole and for related parts. Such measurements and comparisons are reported by Harris and others,¹ who find three specialized growth curves for different organs and parts of the body in addition to the curve for general body growth. These curves are presented in Fig. 6. They emphasize the differential growth rates of various

¹ HARRIS, J. A., JACKSON, C. M., PATERSON, D. G., and SCAMMON, R. E., *The Measurement of Man*. 215 pp., University of Minnesota Press, Minneapolis, 1930.

structures of the body and illustrate the principle of the unevenness of growth. Specialized body parts growing at a rate typified by the growth of lymph nodes include the thymus gland and the interstitial lymphoid masses. These follow the general pattern of curve I in Fig. 6. The pattern of growth for the central nervous system, including the brain, the spinal cord, and visual and auditory neural mechanisms, follows the general course of curve II in Fig. 6. Neural growth thus is characterized by extremely rapid growth after birth

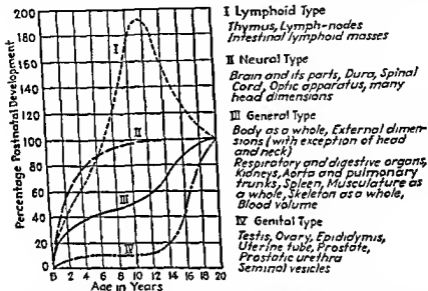


FIG. 6—A graph showing the major types of postnatal growth of the various parts and organs of the body. The several curves are drawn to a common scale by computing their values at successive ages in terms of their total postnatal increments (to twenty years) (Harris, J. A., Jackson, C. M., Paterson, D. G., and Scommon, R. E., *The Measurement of Man*, University of Minnesota Press, Minneapolis, 1930)

and by a long, slow growth phase during postpubescence. These structures attain about two-thirds of the final growth during early childhood, whereas general body development, which is represented by curve III, has attained only about one-fourth of its adult size and maturity.

Curve IV represents a third special type of growth curve, the genital type. This curve was plotted from growth increments of the prostate gland, the testes, the ovaries, the epidermis, the seminal vesicles and other parts of the genital track in both male and female. These organs and parts are characterized by slight growth during infancy and early childhood, which is followed by a period of rapid growth after puberty.

The unevenness of individual rates of growth for the body as a whole and for special parts is even more pronounced than any of the foregoing average curves suggest. The available energy of the body for growth seems to be directed to first one part and then another, but seldom do all body parts increase in size and function at the same time. Thus we may observe maturing periods for dentition, during which general growth in height and weight may be at a minimum, or periods of skeletal development that seemingly are accomplished by delaying other aspects of growth. The concept of the pulse of growth has been suggested, although no definite pattern for such development has been discovered. Seasonal influences upon growth likewise have been observed, but again no basic generalization seems possible at this time.

Sequential Growth—Studies of the development of the human fetus, supported by longitudinal observations of growth during infancy, childhood, and adolescence, indicate that growth follows an orderly sequential course of development that is largely unaffected by various and changing environmental influences. Such a sequential unfolding of organic potentialities suggests that powerful influences are being exerted by hereditary maturational forces. Evidence of the principle of sequential growth during infancy may be found by observing the sequence with which various motor abilities and motor coordinations appear, such as the sequence followed in the eruption of teeth and in the order of the appearance of various mental powers and characteristics. Similar evidence may be observed during the pubescent cycle in dentition, in the ossification of the epiphyses, in the sequential appearance of secondary sex characteristics, and in changes in skeletal size and proportion.

The principle of the unevenness of growth is concerned with the rate and duration of growth during different stages of development. These apparently are determined by an interstimulation of biogenic and environmental forces. This principle is not contradictory to the principle of sequential growth, which states merely that organic growth follows a relatively stable orderly pattern of unfolding that is characteristic of the species but implies nothing about the rates and the duration of growth. Environmental forces exert marked influences over the rates and duration of individual growth, but the order of the appearance of various developmental indices is relatively uninfluenced even by strong differential environmental factors.

The Importance of Growth—An infant spends endless hours in the fascinating discovery of its body. It experiments, feels, and

manipulates until it has a fairly useful knowledge of its body. By the time the child approaches puberty, he not only knows much about his body but has developed skillful habits and complex motor coordinations. From puberty until maturity the whole body—its size, proportion, strength, coordination, and function—changes with such rapidity and in such amounts that it literally becomes a new unfamiliar body that must be rediscovered and recontrolled. Often nothing else is quite so interesting or fascinating to pubescent children as the compelling desire to reinvestigate, rediscover, and relearn their new and rapidly changing bodies.

The first of the four general objectives of secondary education is "to promote the development of an understanding and an adequate evaluation of the self." The importance of this objective long has been recognized by society. Many maxims and often repeated quotations attest its general recognition. Familiar examples are 'Know thyself,' 'To thine own self be true,' and "Love thy neighbor as thyself." If the school is to promote a knowledge and understanding of the self on the part of adolescents and if a school environment conducive to optimal physical growth and development is to be created, it would seem imperative that all teachers possess an adequate knowledge of the principles and the facts relating to the growth and development of the maturing children in their classes.

A knowledge of the facts of growth is of further importance to teachers because of significant positive relationships that exist between physical growth and the growth and development of the intellect, of social traits, character traits, and other less tangible aspects of personality. A large proportion of serious and minor behavioral maladjustments may be explained on the basis of growth deviations that result in feelings of self-consciousness and inferiority and that in turn, give rise to compensatory or withdrawal behavior. Hence a sympathetic understanding of the manifold adjustmental problems associated with growth is of paramount importance for teachers who are guiding children of junior high-school age. Then, too, because of the positive relationships between physical growth and the development of other aspects of personality, teachers frequently assume credit for changes that in reality are the products of biological maturation, or they become discouraged over the lack of development among pupils whose maturational growth is inadequate for the tutorial activities presented.

The very nature of the learning process demands that educational experiences shall be motivated by the strongest possible combination of interests that can be mustered together. The compelling interests of pubescent and adolescent children in their own bodies provide a remarkable group of native interests upon which suitable educational programs may be built. The facts of growth indicate that the nature, extent, and intensity of educational social activities provided for junior-high-school children should be determined in large measure by their growth status and their developmental needs.

AVERAGE-GROWTH NORMS

Physical growth during any single developmental period, as, for example, the junior high-school age, may not be well understood unless this period is closely related to changes during preceding and following stages of development. It is desirable, therefore, to think of the individual's growth from conception, or at least from birth to maturity, as an uninterrupted process. Selecting interesting and significant phases of development for special study is justifiable only when these are considered in relation to previous developmental cycles and trends.

Thus, although we may refer to the junior-high-school age and its characteristics as though this were a separate stage of development, distinct from earlier or later development, it should be borne in mind that no rigorous distinctions may be made and that always the present physical status of each individual is intimately related to his previous developmental history.

The common method of studying physical growth is that of measuring the increments of height and weight for large numbers of children of various ages and of plotting height and weight curves based on average increases at each age level. An unavoidable weakness of curves plotted from average scores is that they tend to obscure significant individual variations and individual rates of growth that are needed to interpret individual growth. However, average curves do contribute to our knowledge of group trends, and they aid in understanding individual growth when they are interpreted in relation to individual records of growth. It is these individual growth records in relation to the health history and to evidences of personality adjustments and maladjustments that yield the most meaningful insight into the life patterns of maturing children. Again it is the whole child with whom we are dealing.

Age-height-weight Norms—The most obvious aspects of physical growth during the junior-high school period are changes in height and weight associated with increases in chronological age. A portion of the Baldwin Wood data showing the height and weight norms or standards for boys and girls of various ages from eight to sixteen are presented in Table II.

Based upon the Baldwin Wood data, Fig. 7 presents graphically average-height curves for short and tall boys and girls at various ages from eight to nineteen.

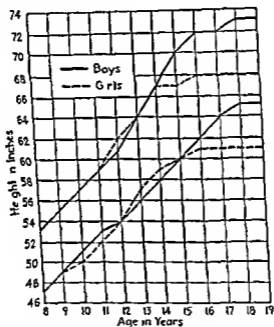


FIG. 7.—Curves showing the average increases in height for tall and short boys and girls at various chronological ages. (Drawn from data of Table II, p. 45.)

It is apparent from Fig. 7 that the average-height curves for tall boys and girls are identical between the ages of eight and eleven, at which time girls enter into a period of accelerated growth, which continues until about age thirteen, whereas a similar acceleration for boys is delayed for about one year. It is interesting to note that tall girls reach their approximate adult height at fourteen years of age, while they are in junior high school. It should be noted that both tall girls and tall boys reach their approximate adult stature at an earlier age than short girls and short boys. Noteworthy, also, are the periods of decelerated rates of growth that tend to precede periods of increased velocity of growth.

TABLE II — WEIGHT-HEIGHT-AGE TABLE FOR BOYS AND GIRLS FROM EIGHT TO SIXTEEN YEARS OF AGE*

Height inches	Average weight for height		Chronological age years																	
			6		9		10		11		12		13		14		16		16	
			B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G
	Weight pounds																			
42	30		39																	
43	41	41	41	41																
44	44	42	44	42																
45	46	45	46	45	46	45														
46	48	47	48	46	46	45														
47	50	50	50	50	50	50	50	50												
48	53	52	53	52	53	52	53	53	53											
49	55	55	55	55	55	55	55	55	55	55										
50	58	58	58	57	58	58	56	59	58	61	58	62								
51	61	61	61	60	61	61	61	61	61	63	61	65								
52	64	64	64	64	64	64	64	64	64	65	64	67	64							
53	68	68	67	67	67	67	67	68	67	68	68	69	66	71						
54	71	71	70	69	70	70	70	70	70	71	71	71	71	73	72					
55	74	73	72	72	72	74	73	74	73	74	74	75	74	77	74	76				
56	78	79	75		76	76	77	78	77	78	77	79	78	81	76	83	80			
57	82	84			79	80	80	82	81	82	81	82	82	84	83	88	83	92		
58	85	89			83		84	84	84	86	83	86	85	88	86	93	87	96		101
59	89	95					87	87	88	90	89	90	89	92	90	96	90	100	90	103
60	94	101					91	91	92	95	92	95	93	97	94	101	95	105	96	108
61	99	108							95	99	96	100	97	101	99	105	100	108	103	112
62	104	114							100	104	101	105	102	106	103	109	104	113	107	115
63	111	118							105		100	110	107	110	108	112	110	116	113	117
64	117	121									109	114	111	115	113	117	115	119	117	120
65	123	125									114	116	117	120	118	121	120	122	122	123
66	129	129											119	124	122	124	125	125	126	126
67	133	133												124	126	130	130	131	134	133
68	139	138													131	134	133	134	135	137
69	144	142														137	135	139	137	143
70	147	144														143	136	144	136	145
71	152	145														146	136	150	140	151
72	157																153		155	
73	163																	157		160
74	169																	160		164
Average height																				
inches																				
Short			47	47	49	49	51	50	53	52	54	54	55	57	58	59	60	60	62	61
Medium			50	50	52	52	54	54	56	56	58	59	60	60	63	62	65	63	67	64
Tall			53	53	55	55	57	57	59	59	61	62	64	64	67	66	70	66	72	67
Average annual gain																				
pounds																				
Short			5	4	5	5	5	6	4	6	8	10	9	13	11	10	14	7	13	2
Medium			6	6	6	7	6	8	7	10	9	13	11	10	15	6	11	4	6	3
Tall			7	8	7	9	7	11	8	13	12	9	16	8	11	4	9	4	7	1

* Quoted by permission of the American Public Health Association, adapted from BAILEY, EDNA W. LATON ANITA D. and BISHOP ELIZABETH L. *Studying Children in School* pp 41-42 McGraw Hill Book Company Inc. New York 1939

Average-weight curves for tall and short boys and girls are shown in Fig 8, which is also drawn from the data of Table II. Sex differences in weight are even more noticeable than those in height, but similar trends are observable. A more striking picture of the average gains in weight by tall, medium, and short boys and girls is shown in Figs 9 and 10. From Fig 9 it is apparent that boys begin to add weight at a faster rate between ages ten and eleven. Tall

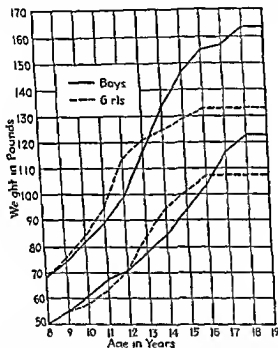


FIG 8—Curves showing the average increases in weight for tall and short boys and girls at various chronological ages. (Drawn from data of Table II, p. 45.)

boys reach their maximum average annual gain of 16 pounds at thirteen, medium and short boys reach peaks of 15 and 14 pounds at the ages of fourteen and fifteen, respectively.

Accelerated weight gains among girls is shown in Fig 10 to begin at age eight for tall, medium, and short girls. These reach their maximum average gains in weight of 13 pounds at ages eleven, twelve, and thirteen, respectively, after which there is a noticeable deceleration in the average annual weight increase. From these curves it would appear that maximum weight increases in both boys and girls slightly precede pubescence. It is noteworthy that these maximum gains occur during the normal junior-high-school period.

Probably the most important generalization that may be drawn from these standards or norms is the wide range of differences in height and weight that are common at each age between boys and girls, among boys, and among girls. Again it must be emphasized that individual patterns of normal growth may not be derived from these averages alone but must be gained from a knowledge of earlier growth trends.

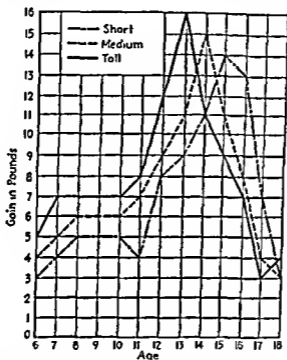


FIG. 8.—Average annual gains in weight—boys (Drawn from data of Table II, p. 45)

Age-grade Distributions.—The significance of school problems associated with growth is emphasized by a consideration of age-grade distributions of children in grades 7 to 9 of junior high schools. Children who enter the first grade at six years of age and advance one grade each year normally reach the seventh grade at twelve years of age. Some acceleration and some retardation are practiced in most school systems, so that a variation of several years is observable in the ages of children entering the seventh grade of the junior high school. Nevertheless, the age of twelve should be considered the normal age for entrance, and those entering younger than twelve should be considered accelerated, whereas those entering at later ages should be considered over age or retarded. The variability in

the chronological ages of pupils entering the low seventh grade of one junior high school is illustrated by the data presented in Table III. An inspection of this table reveals that the total age range of pupils extends from 11.0 to 17.5 years, with almost as great a range in any one grade as there is for all three grades combined. For each of grades 7 to 9 this range is $5\frac{1}{2}$ years.

The distributions of chronological ages of pupils in the seventh grades and in the ninth grades of 10 junior high schools in nine Cali-

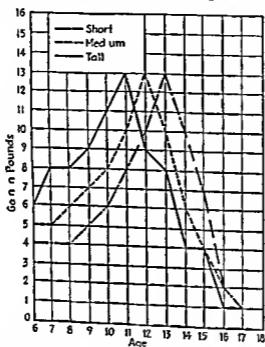


FIG. 10—Average annual gains in weight—girls (Drawn from data of Table II p. 45)

fornia city are shown in Tables IV and V. These tables reveal wide variations in the range of the ages of pupils in the same grade as well as variations between different junior high schools. Variability is the most striking characteristic of these tables, nevertheless it is apparent that the majority of junior high-school pupils fall within the age range from eleven to sixteen, inclusive. The ages of the pupils reported in these tables should be compared with Figs. 7 and 8, showing the average increases in height and weight for boys and girls of these ages. This has been done for the seventh grade children reported in Table III under the hypothetical assumptions that all are boys and all children of each age level fall within the

The Chronological Age Range of Puberty.—Extreme cases of precocious puberty indicate that physiological maturity may be reached as early as two and three years of age. Extreme cases of delayed development extend the period of childhood to nineteen and twenty years of age. The ages for the onset of pubescence tend to be distributed between these extremes according to the normal-probability curve. The normal pubertal age thus should be considered a statistical age range, which suggests a probable proportion of children who might be expected to mature at any given age but, like other normative data, fails to indicate which children will mature early and which will mature late.

Studies that have been made of the age for the onset of pubescence agree upon the one point, that the age varies. None of these studies is sufficiently crucial to yield uncontroversial data, and yet taken together they yield a composite picture that approximates the percentages given in Table VI. Studies reviewed for these data include those of Crampton,¹ Baldwin,² Dimock,³ and Riehey.⁴

TABLE VI.—ESTIMATED PUBESCENT STATUS OF BOYS AND GIRLS OF VARIOUS AGES*

Ages	Prepubescent, per cent		Postpubescent, per cent	
	Boys	Girls	Boys	Girls
10 5	98	94		
11.5	96	79	2	2
12 5	75	56	8	18
13.5	48	15	25	47
14 5	22	5	53	77
15 5	7	2	77	91
16 5	2	1	94	97

* Percentages reported are approximate only, being derived from the studies of Crampton, Baldwin, Dimock, and Riehey, which were conducted independently but which used the Crampton criteria to determine pubescent status.

During each month of the three junior-high-school years, there is a change in the proportion of prepubescent to pubescent children. In the seventh grade about 70 per cent of the boys and about 60 per

¹ CRAMPTON, *op. cit.*, p. 150

² BALDWIN, B. T., "Physical Growth of Children from Birth to Maturity," 411 pp., *University of Iowa Studies in Child Welfare*, Vol. 1, No. 1, 1921

³ DIMOCK, HEDLEY S., *Rediscovering the Adolescent*, 287 pp., Association Press, New York, 1937.

⁴ RIEHEY, *op. cit.*

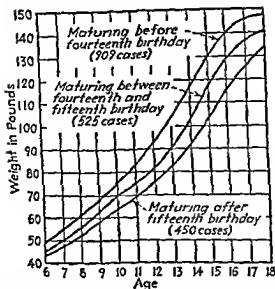


FIG 12—Average weights of boys of different maturity groups at ages six to eighteen. (After Richey H G, "The Relation of Accelerated Normal and Retarded Puberty to the Height and Weight of School Children," Monographs of the Society for Research in Child Development, Vol II, No 1, Serial 8, National Research Council, Washington, D C, 1937)

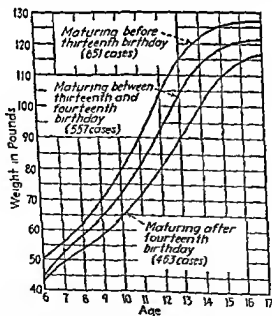


FIG 13—Average weights of girls of different maturity groups at ages six to seventeen. (After Richey H G, "The Relation of Accelerated Normal and Retarded Puberty to the Height and Weight of School Children.")

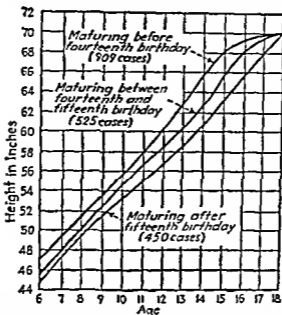


FIG. 14—Average heights of boys of different maturity groups at ages six to eighteen. (After Richey, H. G., "The Relation of Accelerated, Normal and Retarded Puberty to the Height and Weight of School Children.")

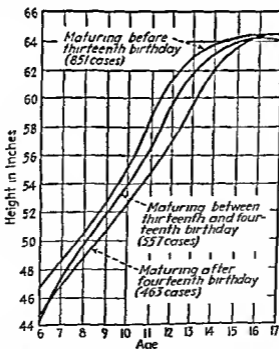


FIG. 15—Average heights of girls of different maturity groups at ages six to seventeen. (After Richey, H. G., "The Relation of Accelerated, Normal and Retarded Puberty to the Height and Weight of School Children.")

between their fourteenth and fifteenth birthdays) are heavier at all ages than those of Group III

3 As a rule, girls and boys of Group I are taller than those of Group II, and children of Group II are taller than those of Group III at all ages before the approximation of adult stature by the groups latest to mature. There are no significant differences in the heights of the different maturity groups of girls after 15 years nor in the heights of the different male groups after 17 years.

4 Growth as measured by height and weight is slightly accelerated before puberty. The decline in the rate of increase after puberty, however, is more striking than the earlier acceleration. The pre-pubertal

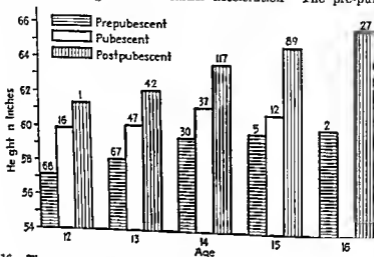


FIG 16—The average height of prepubescent, pubescent, and postpubescent boys at various ages.

"spurt" increases the difference between the heights and weights of the three groups for a short while but difference in the heights and weights of the different maturity groups of the same age are largely to be attributed to long continued differences in the average growth rates.

5 In general it may be stated that measures of variability increase during the period that growth is comparatively rapid. A large part of the variability found for any particular group is probably due to differences in the periods of acceleration and retardation of the growth rates of the individuals making up the group.

6 There are not only great differences in the heights and weights of the maturity groups but also in the relation of weight to height. These latter differences are so large that it appears that no statement concerning overweight or underweight should be made without consideration of the maturity factor.

The differences in the height-weight relationship suggest differences in the height-width ratios or body builds of the three groups. A preliminary

investigation of average hip and chest widths indicates that the various maturity groups differ as much in these measurements as in height and weight and that, as in case of weight the differences continue after cessation of growth.¹

Similarly, in his study of Y M C A boys, Dimock observed large differences between the height and weight of boys of the same chronological age but of different pubescent status. These differences are shown graphically in Figs 16 and 17. In a summary statement Dimock observes that on the average "the postpubescent boy at 15 is five inches taller and 29 pounds heavier than the boy of

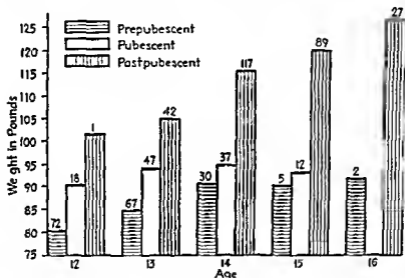


FIG 17—The average weight of prepubescent pubescent and postpubescent boys at various ages

the same age who is not yet pubescent". From the recorded differences between his groups, Dimock concludes that

1 The differences in height and weight of boys of the same chronological age but of different pubescent status were approximately as great as those between boys two years different in age but of the same pubescent status

2 There was a closer association between height and weight and pubescent development than between chronological age and growth in height and weight

3 The most rapid growth in both height and weight comes in the year during which the boy passes from pubescence to postpubescence.²

¹ RICHES *op cit* p 67

² Adapted from DIMOCK *op cit* p 234

The findings of Ruchey and Dimock tend to support Crampton's earlier conclusion that pubescence exerts a significant influence upon physical growth. Other studies likewise contribute additional detailed knowledge of this influence. Pryor¹ studied the height and weight increases of 80 girls at 6-month intervals. Forty of these girls had attained puberty, and 40 were prepubescent. They were matched for chronological age. During the 6 months immediately preceding puberty, pubescent girls were found to have gained weight at a rate 59 per cent faster than during any other 6-month period.

Although we may safely conclude that pubescent status will exert significant influences upon physical growth and although the reported average gains in height and weight may be accepted as valid, a word of caution should be introduced to forestall the possible impression that these average gains should be used as criteria for the normal growth of individual children during adolescence. Educators may use their knowledge of average gains in height and weight during adolescence as a basis for anticipating group needs and interests and in planning appropriate procedures to meet these needs; but they should consider individual growth so highly specific that estimates of normal and abnormal growth and predictions of future development may be made upon the basis of individual records and even then only for short range predictions.

Environment and Pubescence — Earlier it was suggested that the order of the appearance of organic functions appeared to be relatively uninfluenced by environmental factors but that such factors did influence the rate and duration of growth processes. Certain environmental conditions are found to affect the age for the onset of pubescence. Among these should be mentioned the influence of geographic conditions. Children from mild, favorable geographical areas tend to mature earlier than those from less favorable areas. Mills² found that girls from central temperate regions mature earlier than those from colder northern or warmer southern regions.

Children from the upper socioeconomic groups tend to mature earlier than those from less favored groups.³ We are certain of this

concomitant variation of socioeconomic status and earlier pubescent development, but we are not justified in assuming a direct causal influence. Other factors, such as race or heredity, may be the causal influences, and, at present, no crucial data are available.

Observable precocious social development among girls and boys from favored urban families has led to the belief that such factors are causing an earlier onset of pubescence among these children; that because of modern home, school, and community influences and experiences the average age of puberty is being lowered. Although socioeconomic factors and general all-round physical superiority are associated with precocious puberty, there seems to be little evidence to suggest, as is popularly believed, that the stimulating social influences of modern urban environments function as independent causal factors in producing an earlier onset of pubescence. In fact, evidence to the contrary is quoted by Inskeep from the *Institutes of Justinian* as follows:

Pupils both male and female, are freed from tutelage when they attain the age of puberty. The ancients judge of puberty in males, not only by their years, but also by the development of their bodies. But we, from a wish to conform to the purity of the present times, have thought it proper, that what seemed even to the ancients, to be indecent towards females, namely, the inspection of the body, should be thought no less so towards males, and, therefore, by our sacred constitution, we have enacted, that puberty in males should be considered to commence immediately on the completion of their fourteenth year, while, as to females, we have preserved the wise rule adopted by the ancients, by which they are esteemed fit for marriage on the completion of their twelfth year.¹

Pubescence and Body Proportions.—In addition to changes in body height and weight, significant changes in the proportions of the body occur during adolescence. Bodily proportions change during the entire cycle from infancy to maturity, but they are especially noticeable during the period of adolescence. The surface area of the head decreases from 21 per cent of the total body area at birth to 8

J. G., *Growth in Private School Children*, 282 pp., University of Chicago Press, Chicago, 1931. RICHET, *op cit*, p 5

¹ INSKEEP, A. D., *Child Adjustment*, p 148, D Appleton-Century Company, Inc., 1930. From *The Institutes of Justinian*, p 136, translation by Thomas Collett Sanders, Callaghan and Company, Chicago, 1876. The import of this statement becomes more apparent when it is recalled that Justinian wrote in the fifth century referring to practices of the "ancients," possibly those who lived between the third or second centuries B.C. and the first or second centuries A.D.

per cent at eighteen years of age, and the proportionate surface area of the legs increases to 39 per cent,¹ making them at maturity nearly five times as long as at birth.

During adolescence the chest increases in length, width, and depth at a rate proportionate to the general body growth in height and weight. Pelvic breadth increases in both boys and girls along with other pubescent changes, but this growth is more pronounced among girls. In general, all bony structures are undergoing significant changes in length, thickness, and maturity. Indeed, the development of the skeleton, including the dentition, has been suggested as a reliable measure of anatomical age.

Accelerations or retardations in the rate of growth of a part of the body produce exaggerated differences when comparisons are made with other parts at different stages of development. This is particularly true and particularly important when we consider changes occurring in the facial structure of adolescents. The nose reaches its maximum size earlier than other facial structures and seems to be timed with the maximum growth of the hands and feet. The adolescent often is unaware of the transitory nature of these disproportionate changes and is unnecessarily disturbed by his facial appearance. A summary of the changes that take place in the face is presented in the White House Conference Report.² These changes are described as including growth in height, width, and depth, readjustment of the facial mask, and changes in the various angles of the face, with the greatest growth in height and width occurring between the ages of twelve and fifteen for both boys and girls. Because so few adolescent children understand the nature of these changes in the appearance of the face they spend needless hours of worry and anxiety over their temporarily misshapen physiognomy. Personal guidance by teachers is indicated as a means of preventing such worries and maladjustments.

Organic Changes—Although few specialized growth patterns are as yet well understood, the observation seems well founded that various structures and organs of the body grow at very uneven rates during adolescence. The heart is growing approximately twice as

¹ BOYD EDITH. *The Growth of the Surface Area of the Human Body*. Monograph 10. Institute of Child Welfare. University of Minnesota Press. Minneapolis, 1935.

² WHITE HOUSE CONFERENCE ON CHILD HEALTH AND PROTECTION. *Growth and Development of the Child*. Section I. Medical Service. Part II. 'Anatomy and Physiology'. p. 13. D. Appleton-Century Company, Inc., New York, 1933.

fast as it did before pubescence. Changes are occurring in the entire circulatory and digestive systems. The stomach enlarges in size. Such changes in the digestive system are associated with peculiar fluctuations in appetites. No doubt unusual cravings for sweets and sour are associated with some diet deficiency, since they tend to decrease when adolescents are given well-balanced, high-energy diets.

Less apparent, but nevertheless important structural and functional changes are occurring in the entire organic and glandular systems of the body. Of particular interest is the development of the gonads, the thymus, and pituitary. The internal secretions of the reproductive glands are relatively inactive from birth to puberty, apparently being held in check by the pituitary and thymus glands. During pubescence the internal secretions of the gonads, the testes in the male and the ovaries in the female, seem to exert a major influence over the development of both primary and secondary sex characteristics of mature men and women.

Secondary Sex Characteristics—Closely associated with glandular and organic changes and with changes in body proportions and with increases in height and weight, there likewise occurs during adolescence the development or the unfolding of the familiar and characteristic bodily patterns of masculinity and femininity. In boys we may observe a growth of the beard, changes in voice, and a general masculine appearance. In girls there is a noticeable rounding of the breasts, a maturing of the voice, increase of fat deposits about the hips, and other structural changes characteristic of the adult feminine pattern. Associated with all these physical changes among adolescents are strong patterns of behavior that suggest an intense desire to attain a secure position in a superior masculine or in a superior feminine adult society. As has been mentioned, these changes are due in large measure to glandular secretions. Probably nothing is quite so emotionally disturbing to pubescent youths, either boys or girls, as the failure to develop characteristic bodily patterns of masculinity or femininity. The young chap whose body takes on the appearance of a maturing girl, whose voice does not change, and who has no beard commonly becomes the butt of unmerciful teasing and jibes from other children. Both the bodily condition and the attitude of associates create major adjustmental problems. Often informed, alert teachers are able to refer such cases to proper medical or clinical authorities for beneficial glandular therapy.

Health—On the whole, the postpubescent period of adolescence is one in which there is a fairly high resistance to communicable diseases. This is due in large measure to the fact that the body has built up specific protective substances that destroy infections or counteract their poisonous products and in part to the fact that vitality is generally high during periods of rapid growth. However, the rapid physical growth that takes place during adolescence consumes large amounts of energy and places new strains upon the alimentary, circulatory, and integrative organs of the body. Thus the influences of differential growth rates, combined with depleted reserves of energy and vitality, not uncommonly produce symptoms of fatigue and sometimes render the adolescent susceptible to illness and disease. Anemia, nose bleed, headache, nervousness, palpitations of the heart, disturbances in the alimentary, digestive, and pulmonary systems are among the more common physical disturbances of the period.

Many adolescent illnesses other than specific communicable diseases, no doubt, are caused by strains upon the general vitality of the body. Crile¹ has aptly pointed out that "rapid growth is hard work." The consumption of energy and the resulting strains placed upon the body by growth processes should be considered in the same light as those occurring from continued strenuous exercise. Accordingly there is indicated a need for regular competent physical examinations at short intervals, supplemented by systematic daily observations by teachers to detect symptoms of fatigue, overstrain, and nervousness among adolescent pupils, together with wide variations in individual exercise-rest regimens in school.

Rapid growth in height, associated with a greater or lesser amount of fatigue, predisposes to poor posture. Stooped shoulders and exaggerated spinal curvatures place extra strain upon the muscles of the legs and back, causing fatigue and backache. In general, poor posture decreases the efficiency of all visceral organs and increases fatigue. When poor posture is caused by fatigue, rest and not exercise is indicated. Often, however, stooped shoulders result from efforts to cover up or hide excessive growth in height. Mental hygiene is indicated to develop pride in good postural habits.

The importance of understanding the transitional nature of facial growth has been mentioned. No less important to adolescents is the appearance and condition of the skin, which likewise is subject

¹ CRILE, GEORGE. "Menaces of the Adolescent Period," *Nation's Schools*, Vol. 16 No. 3 pp 21-22 September, 1935

to temporary growth factors. The importance of a healthy skin and clear complexion during early adolescence has been pointed out by Thom in the following statement:

Skin eruptions are fairly common during early adolescence. The small ducts through which oil is carried to the skin apparently do not grow fast enough to take care of the increased activity of the glands supplying this secretion, and, as a result, they become stopped up and a comedo, or "blackhead," forms at the opening of the duct. As the glands continue to function even though drainage is blocked, the ducts become overfilled and little raised places, or "pimples," begin to appear on the surface of the skin.

It is unfortunate that just at the time when the growing child's skin is perhaps in need of a little added care he is most tempted by chocolates, candy bars, cookies, ice-cream sundaes, and soda fountain drinks, and possibly most careless about keeping his digestive system in healthy order. Skin specialists have found that proper attention to the fundamental principles of physical hygiene—wholesome diet, free elimination, plenty of sunshine and out-of-door exercise, and thorough daily or twice-daily washing with warm water and soap (which is not nearly so harmful to the complexion as many adolescents believe) will keep most young complexions in good condition. When the skin fails to respond well to this routine, more vigorous measures under the direction of a physician are advisable. It is well known, however, that proper attention to the skin in the early stages of these afflictions can prevent development of the unsightly later stages for which medical treatment may be necessary.¹

With reference to the health of adolescent children, the emphasis in junior high schools should be placed upon the correction of physical defects, the prevention of illnesses, and the development of effective physical hygiene regimen that will promote adjustments and stability during adult life. Physical-education programs should provide differentiated activities adapted to the physical and developmental needs of pupils of both sexes. Classroom activities should be modified to compensate for the growth needs of the body. Special facilities should be provided for modified rest-work programs when these are indicated for adolescents undergoing the physical strains of growth, especially for convalescents. Biologically, adolescence may be made a period of fairly normal physical growth and development if our social demands upon adolescents are made more reasonable, if the schools provide adequate facilities and programs for healthy, normal growth and development, and if both

¹ THOM, D. A., "Guiding the Adolescent," *Bulletin* 225, p. 10. Children's Bureau, U. S. Government Printing Office, Washington, D. C., 1933.

teachers and pupils better understand the facts of growth and the influences that these exert over the development of the total personality

SUMMARY

The relatively serene, complacent, well adjusted preadolescent child almost overnight undergoes a series of physiological changes that have aptly been likened to a metamorphosis. These physical changes involve (1) the maturation of the reproductive organs, glands and secretions, together with associated secondary sex characteristics, (2) phenomenal changes in height and weight, strength, motor coordination, and bodily proportions, and (3) growth of the entire visceral and organic structures and mechanisms of the body.

Physical growth, defined as the increase in size and proportion of the various structures of the body, is influenced by an interaction of the forces of maturation, activity, and environmental conditions. Two basic principles of growth are found operative: (1) from conception to maturity, individual growth is characterized by the unevenness of rates and of the duration of growth processes, (2) physical growth follows an orderly sequential course of development, which is largely unaffected by differential environmental conditions.

The knowledge of the facts of growth are important to teachers in junior high schools because (1) an understanding and an appreciation of the self is held as a fundamental objective in secondary education, (2) structural and organic changes are so pronounced that the adolescent has, in fact, a new body to discover, to understand and to control, (3) the dominant interests of adolescents are centered in their own bodies and in associated relationships, (4) the total personality, in all its varied aspects of adjustment and development is intimately related to physical growth, (5) fundamental bases for the development and administration of individual and group programs of study are to be found in the physical and physiological status.

Average-growth curves or norms are useful in interpreting trends and group changes. They are slightly interpretive of individual growth when used in connection with individual records of growth, but normative data may not be used alone to predict individual growth or to interpret present physiological development.

Increases in height and weight are associated with increases in chronological age. Annually, between the ages of eleven and six-

teen, boys gain an average of 2 inches in height and 10 pounds in weight. During these same ages, girls gain an average of $1\frac{1}{2}$ inches in height and $8\frac{1}{2}$ pounds in weight. The most significant generalizations that may be drawn from normative growth data relate to the nature, extent, and consistency of individual variations of growth.

Increases in height and weight are associated with pubescent status. There appears to be a closer association between changes in height and weight and pubescent status than between growth in height and weight and chronological age. Both boys and girls who attain pubescence at an early age tend to be taller and heavier than those who mature at a median age, and those who mature at a median age tend to be taller and heavier than those who mature late.

The age of pubescence varies. The majority of children become pubescent between the ages of eleven and sixteen. Girls mature approximately one year earlier than boys. The average ages found by various investigators for pubertal change fluctuate around thirteen for girls and fourteen for boys. Average ages may not be used to predict the age for the onset of pubescence for an individual child.

The rate of energy output in an individual changes during different stages of growth. The rate of growth seems to affect the amount of available energy that may be used for functions other than growth. The incidence of disease and the robustness of health seem to be determined in part by these variables.

EDUCATIONAL IMPLICATIONS

The characteristics of growth during the prepubescent and the adolescent period suggest a number of developmental needs that might well be met more adequately through the programs of both elementary and junior high schools. Prominent among these are:

1. The need for greater emphasis upon the regularity and rhythmicity in the daily routines of living. Because growth is relatively steady and slow during the period preceding pubescence, there seems to be a natural tendency for the body to consolidate previous growth gains, to perfect motor coordinations, and in other ways to pave the way for the dramatic structural reorganization of the body during adolescence. School programs and experiences should be planned to facilitate these integrative trends and to anticipate later needs for stability and energy. Accordingly, greater emphasis should be placed upon the development of accepted routines of good physical and mental hygiene and upon the development of good postural habits that contribute to poise and grace in walking, jumping,

running, dancing and in various activities likely to be engaged in during adolescence

2 The need for establishing habits of personal responsibility for good health Not only is there a need for regularity in diet, rest-exercise, sleep, elimination, and the like, but prepubescent children need especially to develop a sense of personal responsibility for maintaining these routines With the onset of pubescence, children characteristically express a strong tendency toward independence and freedom from adult control and supervision If systematic health routines have already been established and if responsibility for them has already been transferred to the child, many of the major problems of adolescence will have been prevented Junior high schools should plan their programs so as to ensure the development of personal responsibility for the maintenance of an effective regimen during the prepubescent period

3 The need for freedom from physical defects and deficiencies The prepubescent period of childhood is a peculiarly appropriate time for the correction of physical defects It is easier to gain the cooperation of prepubescent children in therapies that require patience and systematic routines Then, too, self-consciousness over physical defects is much less exaggerated during prepubescence Nutritional deficiencies need to be corrected as early as possible so as to avoid major developmental influences during pubescence These and many other factors emphasize the responsibility of junior high schools for seeing that prepubescent children are as free as possible from physical defects and deficiencies that would tend to thwart wholesome adjustments and optimum development during adolescence

4 The need for an adequate practical knowledge of the physiology of the body Prepubescence is the appropriate time to introduce many topics on physiological functioning of the body so as to prepare both boys and girls for pubescent changes to follow Girls should not experience the first menses with erroneous or inadequate knowledge of what to expect or how to care for themselves Similarly, boys should not reach puberty without understanding the nature of oncoming physiological changes Although instruction in these areas is essentially a parental responsibility, it is so commonly omitted through ignorance or attitude that it must be assumed by the school in proportion to pupil needs This point is discussed more fully in Chap IV under emotional development Thus, vital

sex-character education has come to occupy a place of increasing prominence in education. Many basic attitudes and understandings may best be established during the prepubescent period, but sex-character education must be extended throughout adolescent development to ensure wholesome adjustments.

The four points of emphasis for the prepubescent period are directed toward the development of stability and hence toward the prevention of adjustmental problems during adolescence. Certain shifts in emphasis as well as certain additional educational implications may be noted for the period following puberty.

5 The need for developmental experiences growing out of interests created by pubescence. In the formation of pupil groups and in planning instructional experiences, cognizance should be taken of the dramatic pupil differences that are created by time variations in the age of puberty. This does not imply that the sexes should be segregated, on the contrary, there is strongly indicated a need for more adequate planning for the development of mutual understandings and adjustments between the sexes, as well as for more flexible adaptations to precocious maturity among boys and among girls. Equivalence of physiological age or status is an important criterion in classifying pupils according to interests and needs.

6 The need for a more extensive, a more flexible, and a more individualized program of health and physical education. It seems trite to assert that such programs should provide for each child, and yet too commonly athletic activities so largely dominate the physical-education programs in junior high schools that the needs of many children are neglected. The physical education department of junior high schools must assume the major responsibility for establishing personal and social adjustments to problems growing out of the physical changes associated with adolescence.

7 The need for a higher degree of intelligent and sympathetic understanding by all teachers of the physical growth needs of adolescent children and of the manifold adjustmental problems that have their roots in physical growth processes and relationships. Probably no major aspect of child development has been more grossly neglected by teacher training institutions than has physical growth, with the result that too many teachers are both ignorant of and unconcerned with problems of physical development. Far too commonly teachers assume the attitude that these are problems for health and physical-education teachers. It would be difficult to overemphasize the point that even English teachers and science

teachers deal with physical boys and girls; that problems of physical development are problems for all teachers, and that in addition to detecting symptoms of nervousness, fatigue, illness, and emotional strain, all teachers should adjust their instructional procedures and their classroom-management procedures to the normal growth needs of adolescent children

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CHAPTER III

MENTAL GROWTH

Understanding the nature and the level of mental development of pupils is a major problem for all teachers. Even casual observations of junior high-school pupils reveal striking differences in their mental behavior. Measurements reveal equally significant differences in their developmental possibilities. When mental measurements are made at repeated intervals, marked growth changes are observable in the same pupils. For effective learning, for wholesome, balanced personal development, school programs must be adjusted to the mental levels of pupils. Educational activities and procedures that purport to stimulate the mental growth and mental efficiency of junior high-school pupils must include or simulate the conditions and principles governing mental development.

Clearly, then, the entire junior high-school program of studies, particularly individualized work-study programs, must take into account individual levels of mental growth in relation to the general nature of intelligence, to the nature and extent of the developmental differences between pupils, to physical growth and pubescence, and to socioeconomic factors. The first three of these factors are discussed briefly in the present chapter. Consideration of the influence of socioeconomic factors is reserved for Chap. IV.

THE NATURE OF INTELLIGENCE

Various definitions of intelligence that have been proposed during the last thirty years have met with little agreement among psychologists themselves. In suggesting definitions for intelligence, the point of view of individual investigators has led them to emphasize different aspects of mental behavior. Several of the more familiar definitions are given below.

Intelligence is the ability to adjust oneself to new situations making the proper use of one's thinking capacity.—**STERN**

It is the power of readjustment to relatively novel situations by organizing new psychophysical combinations.—**BURT**

It is a group of innate capacities by virtue of which the individual is capable of learning in a greater or less degree in terms of the amount of these innate capacities with which he is endowed —COLVIN

An individual is intelligent in proportion as he is able to carry on abstract thinking —TERMAN

Intelligence involves two factors—the capacity for knowledge and the knowledge possessed —HENMON

Intelligence seems to be a biological mechanism by which the effects of a complexity of stimuli are brought together and given a somewhat unified effect in behavior —PETERSON

Intelligence is the power of good responses from the point of view of truth or fact —THORNDIKE¹

The psychological concept of intelligence is defined by Freeman² as "the ability to learn acts or to perform new acts that are functionally useful" Junior high school children have a large variety of functionally useful acts to learn Freeman's interpretation of general intelligence includes all of them But whether or not some of these acts are immediately useful, they must be learned and many involve a mastery or manipulation of abstract symbols and relationships of academic subjects Although junior high-school education should not be restricted to academic subjects, the ability to learn many types of useful acts is positively correlated with the ability to learn these subjects A practical definition of intelligence from the point of view of the classroom teacher would therefore be the ability to learn academic subjects or, in Terman's words, the ability "to carry on abstract thinking" So long as this ability is not considered synonymous with general intelligence, no serious misunderstandings will arise Intelligence-test scores correlate highly with achievement-test scores and hence both or either³ may be used to appraise present accomplishments and probable future accomplishments

Quantitative Descriptions of Intelligence —There are two complementary approaches to descriptions of intelligence The first

¹PINTNER RUDOLPH 'The Individual in School I General Ability, *Foundations of Experimental Psychology* C Murchison ed p 686, Clark University Press Worcester, Mass 1929

²FREEMAN FRANK N, 'The Meaning of Intelligence *National Society for the Study of Education Thirty-ninth Year Book Part I Intelligence Its Nature and Nurture* Chap I p 18 Public School Publishing Company, Bloomington Ill 1940 Quoted by permission of the Society

³HAGGARTY LIDA H, *An Empirical Evaluation of Accomplishment Quotient A Four Year Study at the Junior High School Level* unpublished Ph D dissertation in the University of California Library Berkeley, Calif 1940 For summary, see *Journal of Experimental Education* September 1941

involves the use of definitions, together with certain qualitative terms such as "bright," "dull," "intelligent," "unintelligent," "gifted," or "superior." The weakness of such terms is to be found in their inexactness and in their popular misuse as terms descriptive of types. The second approach to the description of intelligence is in terms of quantitative amounts of intelligence and of differences between pupils. Quantitative descriptions of intelligence are numerically indexed and are expressed in terms of raw scores or such derived scores as mental age, intelligence quotient, or percentile scores. To teachers versed in mental measurement techniques, quantitative descriptions of intelligence are more revealing than lengthy qualitative descriptions and have the further advantage of exactness and comparability. Since qualitative and quantitative descriptions are complementary, either or both may be used as conditions warrant.

A few basic concepts and terms are common in descriptions of intelligence. Some of these are reviewed in the following paragraphs before consideration is given to essential data relating to the growth and development of mental ability among junior high-school pupils.

Chronological Age (C A)—The chronological age is the time that has elapsed from date of birth to a given date. A pupil may say that he is twelve years old, meaning that he was twelve on his last birthday. Technically, however, twelve might not be his chronological age. For example, Henry B. was born Nov. 20, 1929, and was given the Terman Group Test of Mental Ability on Sept. 16, 1942. His chronological age as of the date of the test would be the difference between the two dates. Ordinarily, chronological ages are considered accurate when reported to the nearest month. Henry would thus have a chronological age of twelve years-seven months.

Mental Age (M A)—Among the basic concepts common in mental measurements few have been more widely used than that of the mental age. The mental age is a quantitative indication of the level of mental development that has been attained by the individual. Although mental age is expressed in terms of years and months, it is quite independent of the chronological ages of individual pupils. It expresses the present level of mental development in terms of the average mental development of representative age groups. If Henry B. had earned a mental age of twelve years six months on the Terman test, this would mean that on the basis of this test he had reached a level of mental development equal to the

average mental level of children who were twelve and one-half years old. The mental age thus is a measure of the level of development and suggests the difficulty of the intellectual problems that can be solved. If mental tests yielded true scores, that is, scores in which there were no errors, the mental age might be considered an exact representation of mental status. However, measuring instruments have not been perfected so as to yield true scores, and at present all any test may do is to sample various mental abilities. Under certain conditions we may assume that such samplings are representative of the true level of development.

Intelligence Quotient (I Q)—The intelligence quotient is a numerical index of brightness. It is the ratio between a pupil's level of mental development (M A) and his chronological age (C A). The intelligence quotient may be found by dividing the mental age by the chronological age, as shown in the formula

$$I Q = \frac{M A}{C A} \times 100^1$$

Substituting the data for Henry from the foregoing example, we find

$$I Q = \frac{12.6}{12.10} \times 100$$

By converting both years and months into months, this becomes

$$I Q = 159/164 \times 100 = 97$$

The ratio indicates that Henry's mental development has been slightly slower than the average development of other children of his chronological age. Intelligence quotients below 100 thus indicate varying degrees of retarded mental development, and quotients above 100 indicate varying degrees of accelerated mental development.

Although the intelligence quotient is commonly used in school work and is correctly understood by many teachers, it is being replaced by certain other measures that, in many cases, are more interpretative and more satisfactory. Among these newer measures are the standard score and the percentile score. In part, the trend away from the use of the intelligence quotient may be explained by the widespread popular misinterpretation of the significance of the intelligence quotient, by the possibility that mental growth may not

¹ For convenience, the decimal is multiplied by 100

proceed in a straight-line relationship with chronological age, as this concept assumes, and by the controversy over the length of the mental growth period. It is possible that the marked deceleration in the rise of the curve of mental growth that, on the average, is observable after age thirteen, and its cessation by age sixteen, may be, in part, a function of the mental tests used. That is, mental growth may proceed beyond these ages in ways or areas not measured by mental tests. On the other hand, if mental growth is strongly decelerated around age thirteen and if the true curve of growth is practically parallel to the base line at age sixteen, then the usefulness of the concept of the intelligence quotient is restricted largely to children under the age of sixteen.

Norms—When the standard tests given to school children are scored, the numerical values assigned are called "raw scores." In themselves, raw scores are relatively meaningless. When these scores are compared with measures of central tendency and variability for the group or with similar measures obtained from a larger group or when they are converted into derived scores, they may reveal significant relationships about pupils and groups. Some derived scores are obtained by using norms, which are the mean or median scores earned by pupils who are representative samplings of defined populations. Norms are commonly reported in terms of ages, grades, or percentiles. If representative groups of children of various ages are given a mental test and if the average scores are found for each age level, these may be reported as norms and indicate the normal performance on that test for the specific ages represented. Mental test scores may thus be converted into age, grade, or percentile equivalents. These norms are always found by the standard test maker and are provided as a part of the published standard test.

The Standard Deviation—The standard deviation of a distribution of scores is that measure of variability which, when laid off on either side of the mean, will include approximately 34 per cent of the cases. If the mean of a distribution is 50 and the standard deviation is 10, the indication is that approximately 34 per cent of the scores are between 40 and 50 and that another 34 per cent are between 50 and 60.

In the field of mental testing by definition, the mean I Q is 100. For all age groups, Terman¹ reports an average standard deviation

¹TERMAN, L. M., and MERRILL, M. A., *Measuring Intelligence*, 460 pp., Houghton Mifflin Company, Boston 1937.

of 16.4 points I.Q. for the revised Stanford Binet Scales. This means that approximately 34 per cent of all children have I.Q.'s between 83.6 and 100 and that a corresponding percentage have I.Q.'s between 100 and 116.4. This distribution of intelligence is discussed more fully in a later section.

Standard Scores—The standard score is one of the newer measures that are becoming increasingly popular. The raw or numerical score that a pupil earns on a standard test may be compared with the average score earned by his group. Any individual score may be above or below the average. The difference between an individual score and the average is known as a "deviation score." Thus, if a pupil earned a score of 60 on a test and the group average was 50, the deviation score would be 10. Individual deviation scores may be compared with the standard deviation for the group. In the preceding instance, if the standard deviation was 5, the ratio between these two values would be $10/5$, or 2. This ratio between an individual deviation score and the standard deviation is called the "standard score."

Standard scores obtained from one test may be compared directly with standard scores earned on another test, regardless of differences in units of measurement. Thus an individual's standard score on a mental test may be compared with his standard score on an achievement test, with his physiological age, or with any other standard score.

Percentile Scores—When the items of a statistical series are arranged in order of magnitude, percentile values may be assigned to them. Any given percentile point on a scale means that the indicated percentage of scores lies below that point. The 75th percentile point thus is a point on the scale below which there are 75 per cent of the cases and above which there are 25 per cent of the cases. Percentile scores have the advantage of being easily computed and interpreted. They are especially adapted to the description of mental test performances of pupils above fourteen or sixteen years of age.

Some Basic Principles—Introductory discussions of the nature of intelligence ordinarily report in some detail the underlying arguments and data supporting certain fairly well-established principles and generalizations in this field. It would seem inappropriate to repeat these details here. The following summary statements are presented as a review, and some of these, which are particularly relevant to the present discussion, are considered in later paragraphs.

- 1 Psychologists disagree over qualitative definitions of intelligence
- 2 In psychology the noun 'intelligence' is understood to mean intelligent or unintelligent behavior
- 3 Scientifically, "intelligence" may be defined as the ability that intelligence tests measure
- 4 Individuals differ in the amount of intelligence possessed
- 5 The amount of intelligence possessed by an individual is assumed to be proportionate to the amount measured under standard test conditions
- 6 Differences in amounts of intelligence possessed may be expressed quantitatively on a single continuous scale, ranging from a theoretical zero to a theoretical infinity
- 7 Quantitative variations in intelligence tend to be distributed according to the normal probability surface
- 8 Quantitative differences in intelligence are numerically indexed for example, John's mental age is 11 years 10 months, Helen's mental age is 11 years 2 months, John's I. Q. is 80, Helen's I. Q. is 116
- 9 Qualitative differences in intelligence are verbally indexed for example, John is a *dull* boy, Helen is a *bright* girl
- 10 Qualitative differences may be measured and expressed quantitatively
- 11 When mental ages or intelligence quotients are reported without naming the test used, the assumption is justified that measurements were made with the Stanford Binet scale
- 12 Individual mental tests yield more valid scores than do group tests
- 13 Economy of time and money are the principal reasons for the use of group mental tests in preference to individual tests
- 14 Scores on group mental tests are affected by the reading abilities of pupils
- 15 With repeated testing some variations in mental test scores are to be expected
- 16 Even under varying environmental conditions the true intelligence quotient tends to remain relatively constant
- 17 Mental tests do not measure native ability alone
- 18 Mental test scores are of questionable validity for children reared under highly abnormal social and cultural conditions
- 19 Mental test scores are assumed to be valid for children reared under average or normal environmental conditions
- 20 Mental ability is only one of several basic personality attributes

If intelligence is conceived as the ability that intelligence tests measure which, in turn, correlates highly with ability to do school-work, a practical approach to an understanding of various levels of mental ability would seem to be through a study of mental tests and their relation to the school assignments given pupils in various stages of development. Knowledge of the level of the mental development of pupils as this is revealed by tests is only part of the information needed by teachers. Unless teachers can interpret the mental ability of a pupil in terms of ability to accomplish specific school

tasks, mental measurements are little more than abstractions. A few efforts have been made to discover the proper placement of school subjects, but widespread experimental placements are yet to be made. It is only by proper adjustments between assignments of school tasks and the ability to perform those tasks that we may hope to obtain optimal subject achievement and the best possible growth of personality. For this reason, many educators are advocating the use of standard achievement-test scores as substitutes for those earned on mental tests. This substitution might be justified if actual achievement more closely corresponded to the ability to achieve. Unfortunately, the requirements made of pupils in our public schools are such that there is a negative correlation between achievement and ability to achieve. Pupils with the highest intelligence quotients learn less in proportion to their ability to learn than pupils with low quotients. Although achievement-test scores reveal the knowledge, skill and understanding that is now possessed, they do not suggest whether pupils are working and learning at or near capacity. There is no reason to use either mental tests or achievement tests alone. Both are needed to secure adequate data about pupils.

THE NATURE OF MENTAL GROWTH

The term "mental growth" implies an increase in the size and the complexity of the total neural mechanism including the brain structure. The term "mental development" implies a functional increase in mental power and a change in the organization of mental abilities. From a practical point of view, we are concerned both with neurological changes and with the development and organization of mental abilities. As a matter of fact, no real distinction may be made between mental growth and mental development.

From the point of view of the classroom teacher observations of neurological change are impossible, so that knowledge of mental growth and development is necessarily restricted to observations of changes in mental behavior associated with changes in chronological age and with physical and physiological changes operative during the junior high school period. Mental growth or development means the maturing ability to accomplish increasingly difficult intellectual tasks.

Mental-growth Curves—In Chap. II, increments in height and in weight associated with chronological age changes were plotted as average-growth curves. The same technique may be used to

indicate average mental growth in relation to age changes. Such a procedure necessarily rules out large significant individual variations in mental growth, but it describes the average course of development, and it is useful in interpreting deviations of individual mental growth.

Mental-growth curves have been plotted from data secured in two ways: by retesting the same group of subjects at successive ages or intervals and by testing various chronological age groups at the same time. In either case, curves plotted from the average scores of successive age groups are indicative of the normal course of development insofar as these groups are representative samples of the total-age populations.

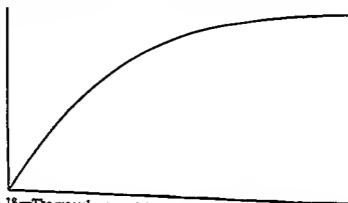


FIG. 18.—The general nature of the relation of altitude of intellect to age in years 0 to 20. (Reproduced from Thorndike E. L. *The Measurement of Intelligence* Teachers College Columbia University Bureau of Publications 1926.)

Curves showing the average course of mental development from birth to maturity reveal a rapid increase during childhood, with a gradually decelerating curve with increases in age. Representative of these findings is the growth curve obtained by Thorndike¹ with the CAVD test. This curve is reproduced in Fig. 18.

Because of the method used in standardizing the Stanford Binet test, the theoretical growth curve obtained with it is a straight-line regression. This relationship becomes apparent when we consider the nature of the concept of the intelligence quotient, which is assumed to be average when increases in mental age correspond to comparable increases in chronological age. Necessarily, the growth curve for intelligence quotients that remain constant at levels below and above average must then follow diverging straight lines at

¹ THORNDIKE, E. L., *The Measurement of Intelligence*, pp. 463-466, Teachers College, Columbia University, New York 1926.

positions indicating their deviations from the normal. Actual curves plotted from Terman's¹ standardization data are shown in Fig. 19. It will be observed that these curves closely correspond to the theoretical straight-line relationships except that at age thirteen, the average and below-average curves begin to flatten out and that they are approximately parallel with the base line at age sixteen, whereas the curve above the mean shows only a slightly perceptible flattening by age sixteen.

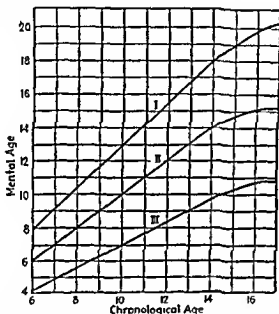


FIG. 19—Diverging mental growth curves at deviate positions (2 S D) above and below the mean (Data from Terman, L. M., and Merrill, M. A., *Measuring Intelligence*, Houghton Mifflin Company, Boston, 1937)

There is some evidence to suggest that the relationship between increases in mental ability and chronological age may be a curvilinear rather than a straight-line relationship, as Terman suggests. Using a correctional procedure, Thurstone² found an S-shaped curve of growth for the Stanford Binet tests, suggesting a positive acceleration of growth in the lower age range, followed by a negatively accelerated curve in the upper levels.

If there were available a valid and absolute unit of measurement for mental growth, the discrepancies revealed by the foregoing

¹ TERMAN and MERRILL, *op. cit.*, pp. 415ff

² THURSTONE, L. L., and ACHERSON, L., "The Mental Growth Curve for the Binet Tests," *The Journal of Educational Psychology*, Vol. 20, pp. 569-583, 1929.

studies might be resolved. However, even with our present measuring instruments, we may be relatively certain that during the junior-high school period, mental growth is negatively accelerated, that the curve flattens perceptibly from age thirteen, and that for the average and below average it is approximately parallel with the base line by age sixteen. This does not mean, however, that all mental growth necessarily ceases between thirteen and sixteen years of age. Several studies¹ indicate that, on the average, mental growth continues until about age twenty.

The same cautions that were expressed with regard to physical-growth curves are equally applicable to mental growth curves. Individual variations are pronounced, and previous individual records of growth in mentality are more suggestive of probable future trends than are average-growth curves. A further note of caution in the use of mental growth curves has been expressed by Anastasi² in the statement that "growth curves are specific to the cultural milieu in which they are obtained" and consequently may only "indicate the general course of development to be expected under given cultural conditions." Such criticisms are equally valid with regard to mental tests themselves. With these limitations in mind, average-growth curves of mental ability may be used advantageously to supplement and interpret individual records of growth.

The Distribution of Intelligence—Studies of representative chronological age groups reveal a wide range of mental ability at each age level. For the total population, the distribution of mental ability tends to approximate the normal probability curve. Public-school populations tend to become more selective with increases in age and in higher grade levels, so that at later ages or in higher grades school populations fail to represent the total population.

Probably the most useful current data showing the distribution of intelligence quotients for the total population between the ages of two and eighteen are those presented by Terman³ for his standardization group of 2,904 American born white children. This distribution, shown in Fig. 20, indicates the percentage of I.Q.'s at

¹ MILES C. C. and MILES W. R., "The Correlation of Intelligence Scores and Chronological Age from Early to Late Maturity," *American Journal of Psychology* Vol. 44 pp. 44-78, 1932. TEAGARDEN, F. M., *A Study of the Upper Limits of the Development of Intelligence*, 112 pp., Teachers College, Columbia University, New York, 1924.

² ANASTASI, ANNE, *Differential Psychology*, p. 167, The Macmillan Company, New York, 1937.

³ TERMAN and MERRILL, *op. cit.* p. 37.

various intervals between 35 and 175. A comparable distribution of intelligence quotients found in one junior high school is shown in Fig 21. It will be observed that the curve in Fig 21 rather closely resembles the normal curve and suggests that some junior-high-

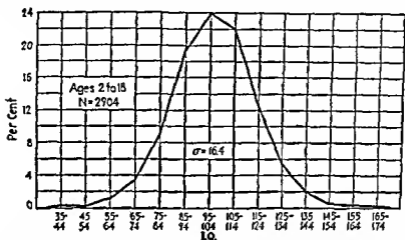


FIG 20.—Distributions of composite L-M IQ's of standardization group (Reproduced from Terman L M and Merrill, M A *Measuring Intelligence* Houghton Mifflin Company Boston, 1937)

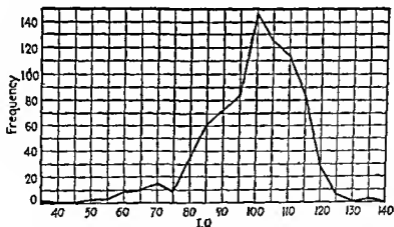


FIG 21.—Distribution of Terman group IQ's in the Redlands Calif. Junior High School 1940

school populations represent an approximately normal distribution of intelligence. Such wide variability may be caused in part by promotional practices that are minimizing the previous selectiveness of the upper grades. The striking population increases in junior and senior high schools since 1910 have tended to be made up of pupils whose mental abilities are below average. Unless present

world conditions serve as a deterring factor, this trend may be expected to continue until junior and senior high schools house all children subject to compulsory-attendance legislation.

The Variability of Mental Growth—The variability of the average mental growth of different age groups may be expressed in terms of the computed standard deviations of distributions of intelligence quotients at various ages. Terman reports an average standard deviation for all age groups on his standardization group of 16.4 points I Q, with standard deviations ranging from 13.2 to 20 points for specific age groups. The significance of increases and decreases of the standard deviation for various ages is seen more clearly in Table VIII. Usually the average standard deviation of

TABLE VIII—INTELLIGENCE-QUOTIENT VARIABILITY IN RELATION TO AGE*

Chronological age	Standard deviation L I Q	Standard deviation M I Q
10	16.5	15.9
11	18.0	17.3
12	20.0	19.5
13	17.9	17.8
14	16.1	16.7
15	19.0	19.3
16	16.5	17.4
17	14.5	14.3

* Adapted from TERMAN, L. M. and BURNELL, M. A., *Measuring Intelligence* Table 7 p. 40 Houghton Mifflin Company Boston, 1937.

16.4 I Q is assumed to represent all age groups. From Table VIII it may be seen that the standard deviation for age twelve is nearly 20 and that the standard deviation for age fifteen is slightly over 19. From a practical point of view, this means that at age twelve, for example, the intelligence-quotient range required to include the middle two-thirds of the cases would be 40 points, that is, from 80 to 120 I Q, as contrasted with the average range of 32.8 points, from 83.6 to 116.4 I Q. It is noteworthy that the standard deviation for ages eleven, twelve, thirteen, fourteen, and fifteen are significantly above the average standard deviation of 16.4. This increased variability is of particular interest for the interpretation of mental growth among junior high-school pupils. Although these data are not crucial, they suggest that the complex physical and emotional factors associated with pubescence may have an influence upon the constancy of mental growth during these ages.

An interpretation of the variability of mental growth may be made in terms of the mental ages required of pupils to maintain constant intelligence quotients at the average and at stated positions above and below average. Curve 2 in Fig 19 indicates the mental ages required at various chronological ages to yield an average I Q of 100, curve 1 in this figure indicates the mental ages required to maintain a constant I Q approximately two standard deviations above the mean, that is, an I Q of approximately 132, curve 3 represents the mental ages needed to maintain an I Q of approximately 68, which is two standard deviations below the mean. At the deviate position of two standard deviations from the mean, there is an average increase in the mental age range of approximately 7 months each year. This fact is shown more clearly in Table IX.

TABLE IX.—MENTAL AGES NEEDED FOR VARIOUS CHRONOLOGICAL AGES TO MAINTAIN CONSTANT INTELLIGENCE QUOTIENTS TWO STANDARD DEVIATIONS ABOVE AND BELOW THE MEAN*

Chronological age	Mental age, I Q 68	Mental age I Q 132	Mental age range
11-0	7-6	14-6	7-0
12-0	8-2	15-10	7-8
13-0	8-10	17-2	8-4
14-0	9-4	18-1	8-9
15-0	9-9	18-11	9-2

* TERMAN, L. M. and MERRILL, M. A. *Measuring Intelligence* pp 415ff. Houghton Mifflin Company Boston 1937

These data mean that in a junior high school class where the distribution of intelligence ranges from 68 to 132 I Q (and that is by no means an unusual situation), twelve-year-old children with I Q's of 68 will have mental ages of 8 years 2 months, whereas pupils of the same age with I Q's of 132 will have mental ages of 15 years 10 months. There will be a difference of 7 years 8 months in the mental ages of such twelve-year-old pupils. If these children maintain a constant growth of mental ability, that is, if at age fifteen they have the same or nearly the same intelligence quotients their mental ages will then be 9 years 9 months and 18 years 11 months, respectively, so that at age fifteen, there will be a difference of 9 years 2 months in their mental ages. Again it should be borne in mind that these data are averages and that individual variations may be greater or less according to the factors determining individual growth. However, the significance of these differences in

mental age is so pronounced that there is great need for relating them to school activities. A mental age of 8 years indicates an intellectual maturity comparable to that of the average eight-year-old child. The difficulty of the intellectual tasks that can be solved is little greater than those which, on the average, can be solved by eight-year-old children. Ordinarily, such children will be found doing average work in the third grade. In like manner, a mental age of 15 or 16 indicates an intellectual maturity comparable to that of the average fifteen- or sixteen-year-old pupil. Normally, fifteen- and sixteen-year-old pupils are doing average tenth- and eleventh-grade work in high school. The contrast between the character of the work usually allocated to the third grade of the elementary school and that usually carried on in the tenth or eleventh grade in high school is suggestive of the difference in the intellectual maturity of children who are of the same chronological age but who vary 7 years 8 months in mental age. In the former group, pupils are beginning to learn simple numerical combinations and are reading simple stories, in the latter, they are solving simple algebraic equations, reading American literature, and doing various tasks involving abstract symbols and relationships.

Mental age differences of from 7 to 8 years are commonly found among pupils of the same age and grade in junior high school. The educational problem is to provide developmental experiences suitable to the individual abilities of each child within the group to which he is assigned. Possible procedures for achieving these ends are discussed in Chaps. V to VIII.

Age-grade Status and Intelligence—In many school systems, promotions are made largely upon the basis of chronological age, with little regard for the quality of work accomplished or the ability of pupils to profit from instructional activities in the traditionally organized next higher grade. Thus there is a trend against both acceleration and retardation of pupils. The assumptions underlying these promotions are that, on the average, pupils of the same chronological age work better together and that each grade is responsible for providing suitable instructional activities for all pupils irrespective of differences in present achievements and abilities. The belief is quite widespread that such promotional practices have reduced the variability of ages within a class, grade, or school division. However, in spite of decreasing numbers of retarded and accelerated pupils, there still appears to be a fairly strong negative correlation between age-grade status and intelli-

gence. This condition is well illustrated by the data presented in Fig. 22, which is a scatter diagram of the intelligence quotients and ages of 791 pupils of grades 7 to 9 in one junior high school. The correlation coefficient yielded by these data is $-.55 \pm .01$. This picture for an entire junior high school is only slightly different from

Terman group intelligence quotients	Chronological age												
	11-0	11-5	12-0	12-5	13-0	13-5	14-0	14-5	15-0	15-5	16-0	16-5	17-0
135				2			1						
130	1												
125				3	2		1						
120		1	3	6	4	4	7	2					
115		6	5	8	13	20	21	7	1	1			
110	2	5	13	18	12	19	27	14	1	1	1		
105	1	2	13	27	23	18	21	13	2	3			
100		1	8	18	29	35	27	8	12	3	2	2	
95			7	7	6	17	18	15	5	6	1	1	
90			4	4	10	11	9	13	9	9	2	1	
85			1	3	5	5	9	17	6	8	5	1	
80			1		1	4	3	6	8	5	3	2	1
75						1	3	1	1	1	1		
70					1		2	3	3	2	2	1	
65							2	2	2	1	1	1	
60								2	3	1	3	1	
55											1	1	
50										1			
45													
40													
35				1									

FIG. 22—Scatter diagram of the chronological ages and intelligence quotients of 792 pupils in grades 7 to 9 of one junior high school. (Data from the public schools, Redlands, Calif., 1940)

that obtained for each of the grades alone. Although it is possible that this relationship is not typical of the nation, it probably is widespread and indicates that, on the average, the younger junior-high-school pupils will be the more intelligent.

Some educators contend that when over-age pupils with low intelligence quotients are grouped with younger pupils of higher intelligence quotients, differences in mental ability tend to be

decreased. Distributions of the chronological ages of the pupils in 10 junior high schools were shown in Tables IV and V. Distributions of the mental ages of these same pupils are shown in Table X. A comparison of Tables IV, V, and X reveals a marked similarity in the dispersions of both chronological ages and mental ages. Here the presence of over age pupils does not appreciably reduce the spread of mental ability. It is apparent that the mental ages of children in each grade have a range of approximately nine years. A mental age difference of nine years approximates the normally expected dispersion for age fourteen, as indicated in Table IX.

TABLE X.—MENTAL AGES OF PUPILS IN THE LOW SEVENTH AND THE HIGH NINTH GRADES OF 10 JUNIOR HIGH SCHOOLS*

Mental age	Grade low 7	Grade high 9
18-0 to 18-5+		13
17-6 to 17-11		49
17-0 to 17-5	1	78
16-6 to 16-11	2	112
16-0 to 16-5	6	132
15-6 to 15-11	17	199
15-0 to 15-5	38	216
14-6 to 14-11	86	231
14-0 to 14-5	160	226
13-6 to 13-11	227	215
13-0 to 13-5	328	186
12-6 to 12-11	374	150
12-0 to 12-5	254	145
11-6 to 11-11	234	65
11-0 to 11-5	101	29
10-6 to 10-11	26	10
10-0 to 10-5	7	3
9-6 to 9-11	3	

* Data from public schools San Francisco Calif., 1933

Chapter II presented the nature and influence of the pervasive physical and physiological growth changes likely to occur between the ages of twelve and seventeen. This picture of variable physical growth should be interpreted in the light of a negative correlation between chronological age and intelligence and in the light of a probable dispersion of from eight to nine years in the mental ages of pupils in a single grade of the junior high school. The implications growing out of these combined growth factors are far reaching.

indeed. Often young or prepubescent pupils are able to outperform their older adolescent classmates in intellectual tasks. Experience, physical status, and social prestige contribute to the influence of the adolescent pupils. Group morale, attitudes toward the more intellectual requirements of the school, extraclass activities, the nature of the instructional program, all are likely to be dominated by the older, less intelligent pupils. One of the unfortunate conditions observable in public schools today is the negative relationship between the actual achievements of pupils and their ability to achieve. The interpupil relationships mentioned above may contribute in no slight degree to the failure of brilliant pupils to achieve more nearly in proportion to their abilities.

These factors of diverse physical and mental growth in relation to chronological-age changes should challenge teachers to discover new and more effective means of stimulating the scholastic development of each pupil in accordance with his needs. No one plan will be found most suitable for all pupils or for all grades. To be sure, administrative procedures and cooperative planning by the entire school materially facilitate the discovery and use of appropriate procedures, but much of the responsibility for the all-round development of each pupil rests essentially with the teacher.

The Constancy of the Intelligence Quotient.—Estimates of probable future mental ability commonly are made from the intelligence quotients of pupils under the assumption that the intelligence quotient remains relatively constant. Obviously the predictive value of the intelligence quotient will vary with its constancy. If the intelligence quotient changes markedly from year to year, predictions are unreliable. If it tends to remain relatively stable, useful predictions may be made. Excellent reviews and interpretations of investigations in this field have been presented in some detail in the *Thirty-ninth Yearbook of the National Society for the Study of Education*.¹ More elementary discussion of this problem may be found in many standard textbooks of psychology and of educational psychology, and no point will be served by reviewing these studies in detail here. A great part of the confusion has arisen over varied interpretations of data because of a failure to distinguish between true intelligence quotients of pupils and those that are obtained from a single fallible mental test.

¹ THE NATIONAL SOCIETY FOR THE STUDY OF EDUCATION, *Thirty-ninth Yearbook* Parts I and II "Intelligence: Its Nature and Nurture," Public School Publishing Company, Bloomington, Ill., 1940.

The following generalizations seem defensible from an evaluation of the available data of this problem

- 1 The true intelligence quotient tends to remain relatively constant throughout life
- 2 Only by repeated testing over several years may an individual's true rate of mental growth be approximated
- 3 Upon retest, intelligence-quotient fluctuations of plus or minus 5 points are common.
- 4 Chief among the factors producing fluctuations in the intelligence quotient are biological irregularities in physical and mental growth, physical defects and diseases, environmental influences, coaching and practice, and errors of measurement
- 5 Large individual differences in rates of mental growth are constantly found
- 6 Fluctuations are more noticeable among children testing in the extreme upper and lower ranges of intelligence
- 7 Variations in the size of the intelligence quotient are greater when tests are repeated at wide intervals, that is from 5 to 10 years apart
- 8 Correlations between tests given from 5 to 10 years apart are so low that predictions are inaccurate when made from earlier tests
- 9 At maturity, children who have tested at 140 I Q are likely to fall anywhere in the upper quarter of the college-educated population in the United States
- 10 Mental growth is likely to be more variable beyond the age of twelve
- 11 Varied and challenging environmental conditions tend to stimulate mental growth.
- 12 Dull monotonous environmental conditions tend to retard mental growth.
- 13 Potential environmental effects are seldom realized, because environmental conditions affecting pupils tend to remain relatively constant
14. The organization of specific mental abilities changes with age

The Cessation of Mental Growth.—A further perplexing problem of mental growth is that of discovering how long an individual's mental ability may be expected to continue to grow at the rate indicated by his intelligence quotient

Terman¹ found that on the average there is a gradual deceleration in the rate of mental growth after age thirteen, and that for all practical purposes, the growth curve has flattened to a straight line by age sixteen. This relationship becomes apparent from an inspection of Fig 19. It will be observed however, that the deceleration of growth is less noticeable for pupils having intelligence quotients at two standard deviations above the mean. For such persons mental growth probably continues well beyond this age limit

¹ TERMAN and MERRILL, *op cit*, p 23

Not all investigators agree with Terman's findings. Freeman¹ found some deceleration in the rate of mental growth beyond age fifteen but concluded that mental growth continues well beyond age seventeen. In general, most investigators² agree with the following generalizations:

- 1 The curve of mental growth is negatively accelerated.
- 2 On the average the mental growth ceiling is reached sometime during the late teens.
- 3 As compared with other groups mentally superior children experience a more rapid rate of growth which continues for a longer period of time.
- 4 Average children develop at a faster rate and for a longer period than do dull children.
- 5 At present there are no suitable mental tests to measure the mental ability of extremely gifted children even during early adolescence.
- 6 In some individuals mental growth may continue far beyond middle life.

For the most part, junior-high-school pupils are approaching their maximum levels of mental growth. This means that, on the whole, junior-high-school pupils are able to perform intellectual feats that are as difficult as any they are likely to perform in later years.

A consideration of the constancy of the intelligence quotient, along with the ages for the cessation of mental growth and the widening pupil interests during these ages, suggests specific instructional responsibilities for the junior high school. These data suggest that the junior high school is the most opportune period to present those stimulating, challenging, intellectual situations and conditions that contribute most highly to increased mental growth and to the prolongation of the period of growth. Although we may not know with any degree of certainty just how much influence such environmental conditions may exert over the mental growth of an individual pupil, we may be relatively certain that, on the average, an unchallenging, monotonous school environment tends to depress mental growth. Since there is a chance that not all the potential growth possibilities have been realized, the junior high school should provide abundant opportunities for further mental development. Desirable are instructional procedures that contribute to the development of critical thinking, logical reasoning, techniques of problem solving, and, in general, to the development of the scientific attitude.

¹ FREEMAN, FRANK N., 'Intellectual Growth of Children,' *Psychological Monographs* Vol 47, No 2 Whole No 212 1936

² THE NATIONAL SOCIETY FOR THE STUDY OF EDUCATION, *Thirty-ninth Yearbook*, Parts I and II op cit

Greater emphasis upon the development of such mental qualities tends to further mental growth and to increase the efficiency of mental powers already present

PHYSICAL AND MENTAL RELATIONSHIPS

Attempting to understand the interrelationships between the physical and mental aspects of persons is an old and complex problem. Although teachers are interested in the nature of the specific influences that produce changes in the physical and mental behavior of pupils, it would be difficult indeed to analyze pupil behavior into strictly physical and mental components. When Billy torments Mary in the classroom or on the playground, appropriate adjustments may be facilitated better by an understanding of the total personal social relationships involved than by theoretical analyses of body mind relationships. Indeed the data of experimental psychology tend to support the interpretation of body mind relationships as being two complementary aspects of a single process. It is with certain of these interrelationships that the remainder of this chapter is concerned.

Physical and Mental Growth — The physical and mental growth curves presented in Fig. 6 reveal strikingly different rates of development for these processes. The neural structures of the body mature at a much more rapid rate than do the total somatic structures. There is ample neurological evidence to demonstrate an intimate relationship between intellectual behavior and the growth of the total neural structures of the body. Maturation appears to exert such a strong influence over these differential growth patterns that relatively temporary or transient environmental conditions that influence body growth and body efficiency have relatively little influence upon the growth of the nervous system.

The evidence reviewed by Paterson¹ emphasizes the relative independence of physical and mental growth factors. Malnutrition, focal infections such as dental caries, diseased tonsils and adenoids, or illnesses may retard or otherwise influence physical growth materially, but, on the average, they seem to exert little measurable influence over mental growth. It would appear that the central nervous system occupies a place of central importance in the autonomic organization of the body, which ensures its continued growth, even at the expense of other somatic parts. The continued growth

¹ PATERSON, D. G., *Physique and Intellect* 304 pp., D. Appleton Century Company Inc. New York, 1930.

of the central nervous system to its mature status seems to be affected only after extraordinarily serious impairments have been inflicted upon the body as a whole. A few specific diseases attack the central nervous system directly and, as a consequence, may arrest development. Examples of such diseases are encephalitis lethargica, spinal meningitis, and brain syphilis. Certain chemical poisons introduced into the blood stream may disrupt normal neural growth. Endocrine deficiencies or disfunctions may exert strong influences over the functioning of the nervous system. Striking examples of endocrine influence may be seen in cases of thyroid deficiency. During infancy, thyroid deficiency causes, or is contributory to, the condition of cretinism, and similar thyroid deficiencies result in various degrees of myxedema during adult life. It is likely that the entire endocrine system exerts a more powerful influence upon the functioning of the nervous system than has hitherto been believed. It is possible that a properly balanced system of endocrine hormones may actually be the regulatory mechanism that, in large measure, determines the rate and extent of neural growth as well as the physiological effectiveness with which this system functions. Today important research data that may reveal significant answers to many of our present inexplicable problems are being accumulated. Thus in time the intellectual incompetence of many junior high-school pupils may be found to be a result, at least in part, of endocrine deficiencies or imbalances.

The Correlation of Physical and Mental Traits—A few gifted individuals who have attained outstanding success in academic, artistic, or literary fields have been physically weak, emotionally unstable, or eccentric in their social relations. Similarly, some individuals are found to have strong desirable qualities that seem to compensate for deficiencies or weaknesses in other areas. Faulty reasoning based upon striking instances of such compensatory development has resulted in a popular theory of compensation to explain relationships between physical, mental, and social traits. Thus the slow learning child is presumed to retain for a longer period of time that which he has struggled so hard to learn. Under the theory of compensation intellectually gifted children are presumed to be physical weaklings, beautiful artistic girls are presumed to be intellectually stupid. Similarly, persons who are deprived of one or more sense organs such as vision or hearing are presumed to develop greater sensitivity in another sense organ as a compensation for their loss. Experimental evidence fails to support this theory of com-

pensation. On the contrary, the evidence that continues to be accumulated reveals low but positive correlation between desirable physical and mental traits. Children who are gifted intellectually, on the average, will be found to have superior physiques, a greater number of artistic talents, more stable emotional adjustments, better health, stronger and more varied interests than their less gifted associates¹

Pubescence and Mental Growth.—The pronounced physical growth that occurs during adolescence does not seem to be associated with a corresponding period of accelerated mental growth. Significant increases in the variability of mental growth are observable between the ages of eleven and seventeen, but there is no critical evidence to suggest that these are caused by changes in pubescent status

When children of the same chronological age but of different pubertal status are compared, postpubescent children average higher in intelligence than do pubescent or prepubescent children². Similarly, it may be said that children of superior mentality attain puberty earlier than average children or children below average in intelligence³. There is some evidence⁴ to suggest that the most rapid rise in mental ability occurs between the ages of nine and twelve. However, there is no clear indication that these changes are caused by changes in pubescent status. Jones⁵ found that, on the whole, experimental studies fail to demonstrate a significant relationship between pubescence and mental growth. In his review of later experimental studies, Shock⁶ concluded that "individual

¹ TERMAN, L. M., *Genetic Studies of Genius*, Vol. 1, p. 144, Stanford University Press, Stanford University, Calif., 1926

² STONE, C. P., and BARKER, R. G., "Aspects of Personality and Intelligence in Postmenarcheal and Premenarcheal Girls of the same Chronological Age," *Journal of Comparative Psychology*, Vol. 23, pp. 439-445, June, 1937.

³ TERMAN, L. M., "The Physical and Mental Traits of Gifted Children," *Education of the Gifted Child*, Part I, pp. 155-167, *Twenty third Yearbook of the National Society for the Study of Education*, Public School Publishing Company, Bloomington, Ill., 1924. LUTZ, W. E., "Relation of Mental to Physical Growth," *Psychological Clinic*, Vol. 15, pp. 125-129, 1924.

⁴ STUART, HERMAN M., "A Study of Sensory-motor and Conceptual Thinking in Children Ages Nine to Eighteen," *Journal of Experimental Education*, Vol. IV, pp. 147-153, December, 1935

⁵ JONES, HAROLD E., "Relationships in Physical and Mental Development," *Review of Educational Research*, Vol. 6, No. 1, p. 118, 1936

⁶ SHOCK, NATHAN W., "Physiological Factors in Mental Development," *Review of Educational Research*, Vol. 9, No. 1, p. 109, February, 1939.

differences in the rate of physical maturing exist from earliest childhood and are associated with differences in the rate of mental maturing." In general, then, we may conclude that individuals with a rapid rate of general physiological growth tend to have a correspondingly rapid rate of mental growth and that individuals with a slow rate of general physiological growth tend to have a correspondingly slow mental growth. We should observe, however, that the relationship is not close, that wide variations occur, and that many factors may combine to produce these relationships.

SUMMARY

Individual pupils differ widely in the amount of mental ability they possess and hence in the ability to perform difficult tasks. The distribution of intelligence among junior-high-school pupils tends to approximate the distribution of intelligence in the total population. Mental-growth curves for low-ability and for high-ability groups diverge increasingly with increases in chronological age. At deviate positions, two standard deviations above and two standard deviations below the mean, the mental ages of pupils diverge increasingly at the rate of approximately 7 months each year. At these deviate positions, mental-age differences between pupils of the same chronological age is 7 years at age eleven and 9 years 2 months at age fifteen.

In spite of modified instructional programs with a noticeable lessening of promotional failures in the junior high school, there appears to be a strong negative correlation between intelligence and age-grade status.

Because of their relative constancy, the intelligence quotients may be considered a fairly useful measure of brightness during the junior-high school period. Mental growth continues during the late teens, although there are few adequate tests to measure the growth of superior children during adolescence.

There is a close interdependence between physical and mental aspects of persons, yet fluctuations of physical- and mental growth curves appear to be relatively independent. During pubescence, spurts of physical growth are not paralleled by spurts of mental growth. Mental growth appears to be relatively unaffected by minor fluctuations in physical health and energy. The variability of mental growth increases during pubescence, but, on the whole, pubescence does not seem to exert a major influence over the development of mentality.

EDUCATIONAL IMPLICATIONS

The wide individual differences in mental growth during the junior high-school years suggest five rather far reaching implications for junior high-school education

1 If the junior high school is to provide a suitable environment in which the mental abilities of all pupils may be optimally developed the program of studies must be equally challenging to all pupils

2 If the junior high school provides only a single-type program that is suitable for the majority of pupils, those who are not average will be handicapped in proportion to their deviate positions from the mean.

3 If pupils whose mental development is markedly below normal are expected to attain average achievement, their efforts are likely to result in failure and they will tend to develop physical and emotional strain, attitudes of defeatism, and a strong dislike for all aspects of cultural and academic education.

4. If pupils whose mental ability is markedly above average are expected to attain only average academic achievement, their abilities and special talents will be unchallenged, and they will tend to develop habits of indolence procrastination, and carelessness

5 It is no longer possible to maintain the conventional achievement differences between grades 7 to 9 of the junior high school and at the same time to provide adequately for the wide individual differences in the mental abilities of pupils now in school, and hence the total program of studies must be constructed around specific differentiated objectives materials and procedures that are related to the observed developmental differences among pupils

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The pubertal ceremonies and with adult society, with period when the physiological adolescents often rebel against had prepared them to enter into a new phase to treat adolescents as all adult members of the group. Frequently parents are and practices of the group are for children and are unable to youths. The public ceremony, authority and dominance they of their maturing status and that and teachers are willing to group. Margaret Mead¹ has said are content to guide rather stances, adolescent problems welcome both their company mum if they are not prevented.

Our understanding of the nature of femininity—Pubescent boys the period of adolescence may with activities and modes of intrinsic problems inherent in behavior. Boys studiously puberty. Rather, the manifest the prevailing interests and observable during adolescence interests and accomplishments tion of modern Western civilization in part on this basis. The the maturing individual at a different masculine mode may like-recognition would prove the physical skill lose much of their which fails further in acquaintance adolescents are not present to what society expects of him. Desire to drive an automobile real and social in nature and are to drive. Limitless examples the maturing biological individual among adolescent boys that are

Under prevailing social conditions unconscious desire to attain needs of youths can be met. The world these needs cannot be met to a degree in attaining a secure place attain economic security at a very desire for permanent waves influences personality develop fashion, the interest in social. Because many strong basic feminine conversations all are are not being met in society, to be recognized as members emphasis must be placed upon effective ways of sublimating group—Social approval, and teachers can assist in this process the strongest drives influence they understand the nature of it. Membership in a relatively children. A basic to the security of all

In junior high school, as pubertal behavior, the standards of time through the period of puberty the group tend to become the tion patterns are observable as giving him a feeling of security

The Need for Independence. When he is groping for drives of adolescent behavior is adult. Unguided adolescent

¹ MEAD, MARGARET *Coming of Age*, their membership and quite pany, Inc., New York 1928. Relationships with nonmembers

Through the extraclass activity program, the junior high school can do much to counterbalance the cliquishness of such natural groups and provide socializing experiences for children who might otherwise be left out of natural groups

Heterosexual Adjustments—Closely akin to the need for belonging to a group is the dominating interest and the need of maturing children to make satisfactory adjustments with members of the opposite sex. In a preliminary report of the social development of adolescents, made as a part of the University of California Adolescent Study, Cameron states

If we inquire what are the leading interests of these teen aged boys and girls, the first point that we note is that many of them are searching intently for opportunities which will facilitate their contacts with members of the opposite sex. They are finding these opportunities principally through dancing, going to parties, in groups listening to the radio, the movies, and through conversation. But of all these activities the thirteen to fifteen-year old boy and girl seems to find dancing the most consistently and endlessly interesting.¹

No doubt interest in dancing varies somewhat in different communities, but whatever form of social activity is used, the compelling force is largely that of making satisfactory adjustments with members of the opposite sex. Until this adjustment is accomplished, there tends to be a bashful reticence evidenced in every situation that involves members of the opposite sex. Since childhood homosexual groups no longer satisfy social requirements, boys or girls who have failed to make appropriate adjustments either are left out of social activities or tend to sit on the side lines in an embarrassed frame of mind. These attitudes carry over into the classroom and commonly affect regular schoolwork. For these reasons many junior high schools are finding that the supervised dance is providing one of the most satisfactory means of promoting heterosexual adjustments.

Recognition of Maturity.—In the so-called "revolt from authority" that is commonly observed during pubescence, it is sometimes difficult to detect strong tendencies of children to seek a status of equality with adults, and yet this drive appears to be universal. In many instances this tendency is almost inseparable from efforts to achieve independence and perhaps is only another way of looking at the same basic phenomenon. When adults sincerely treat adoles-

¹ CAMERON W. J., *A Study of Social Development in Adolescence*, Institute of Child Welfare, University of California, Berkeley, mimeographed, 1940

cents as young adults, they flatter them in an extremely acceptable manner and at the same time gain their confidence and build a foundation for the most effective kind of guidance. Learning how to treat pubescent children as young adults thus becomes one of the most important techniques for teachers. This attitude not only affects the pupil favorably, but it influences the teacher as well and makes for a much more wholesome relationship in all pupil teacher contacts. Because of their extreme sensitiveness to adult attitudes, adolescents respond quickly to what is expected of them. When teachers or parents treat them as responsible young adults, they tend to react accordingly.

Exploratory Experimentation—It has been emphasized that children seek to satisfy their needs and longings in the most direct and effective ways that they know how to use. In seeking freedom to establish themselves in an adolescent group with a secure position in a superior masculine or feminine world, in seeking to discover ways of adjusting to the opposite sex, and in seeking to attain recognition of maturity by adults, adolescents are faced with problems for which they have relatively few effective and acceptable means of solution. For the most part, public schools have given little help to adolescents in these problems, with the result that they are forced to discover solutions for themselves. A very large portion of the erratic, bizarre behavior of pubescent children is explainable as an exploratory experimental effort to find effective ways of satisfying their felt needs. The strong demand for independence does not permit adults to present them with answers directly, but the desire to be recognized as young adults does provide an excellent opportunity for indirect guidance in the solution of personal problems. Adults are much less prone to criticize and condemn erratic and seemingly futile behavior of adolescents when the behavior is interpreted as a normal response to problem situations that they must face but that are beyond their comprehension and ability to handle. Instead of offering only criticism and reproof, both teachers and parents need to provide suitable opportunities for developmental experiences that will facilitate needed adjustments. If these adjustments can be made early in the pubescent cycle a major part of the agonies and maladjustments of later adolescence and adult life can be prevented. This is one of the principal functions of junior high school education.

The organic needs, the personal wants, wishes, and longings of youths demand satisfactions in a specific social context, and hence

the cultural environment is interwoven with the needs of young adolescents. Very briefly, we have suggested certain basic drives, compelling and influencing the behavior of young adolescents. We turn now to a consideration of the social and environmental conditions in which adolescent personalities must develop.

SOCIAL INSTITUTIONS

Youth in America must learn to become a part of an increasingly complex social order. Rapid change characterizes practically every phase of society. A casual inspection of social conditions suggests an unpatterned chaos, yet underlying the shifting standards and ideals and the selfish pressures of minority groups there are order and regularity. Because of change and complexity, the interpretation of the more fundamental trends and relationships becomes increasingly difficult. Institutional progress is observable, but so too are institutional conflicts. The individual is caught between conflicting institutional demands on the one hand and personal wants and needs on the other.

During the centuries of our social evolution individuals in small and in large groups have developed many effective ways of meeting common needs. Since it has never been possible to satisfy all or even a major portion of these needs, there is a continuous effort to discover new and improved ways of solving common problems and of promoting social intercourse. When effective ways of carrying on human intercourse are discovered, these tend to become the permanent accepted customs of the various groups wherein they are practiced. Thus in our present Western civilization, there has evolved a relatively stable body of mores, traditions, and attitudes that are, or tend to regulate, the approved ways of solving basic problems in the various areas of human relationships. The more fundamental problems of humanity may be grouped into five related fields. These are the areas that are commonly referred to as social institutions and include the family, the school, the state, the church, and industry. No one may live in our present society apart from membership in, or relationships to, each of these institutions. Since these institutions evolved in response to expressed human needs and since in their present form they represent the cumulative experiences of the race in meeting continuous and recurring needs, the body of customs and traditions that characterize each institution must be considered among the most valuable heritages of the past. To ensure the relative permanency and wide-spread enforcement

of the more important of these customs, society has embodied them into laws

The Family—The family is the basic unit of organized society. Fundamentally, it is composed of two persons who live together in order that they may perform certain functions more satisfactorily. These functions are affectional and biological in nature. The affectional functions include all protective and utilitarian phases of family life. The biological functions are those of propagating the species. Out of these fundamental drives there has evolved throughout the centuries the social institution of the family. The present monogamous family has resulted from various experimental forms of family life. For Western civilization the patriarchal type of monogamous family has for many years been considered the most satisfactory type of family organization. Within this broad framework, widespread differences exist with respect to the function and relationships that should be maintained among individual members of the family. Thus, for example, we may observe variable interpretations as to the place of women in the family. One rather ancient concept was that women were to be considered servants of the husband, who was regarded as the master of the household. This attitude held sway from the beginning of the patriarchal family until comparatively recent times. Within the last hundred years, however, there has been a notable change of public opinion toward women. This change has been particularly noticeable in the United States, where higher education of both a cultural and a professional nature is being provided where women are given suffrage rights and where they may compete with men in most business and professional fields. Such changed interpretations of the place of women in the family question the suitability of the customs and traditions that for many centuries dominated family relationships. Innumerable other factors originating both in the family and in other social institutions likewise challenge the inviolability of traditional patterns of family life.

This is not the place to review the history of the family or to suggest desirable or undesirable patterns for modern family life. Here we are interested in observing that the mores, traditions and customs that are woven into our concept of home and family life are a result of the experiences of the race in attempting to discover an effective compromise between biological and social factors involved in perpetuating the race. We are likewise interested in observing that marked individual reinterpretations of relationships among

Although governmental forms may thus be considered transitory means of solving problems, certain underlying principles interpreting the nature of the state tend to be perpetuated. The purposes for which our state was organized, as stated in the preamble of the Constitution, were "to establish justice, to insure domestic tranquility, to provide for common defense, to promote the general welfare, and to secure the blessings of liberty to ourselves and our posterity." These purposes have become interwoven into practically every phase of social and political organization. Today the ways in which these principles are influencing every day life are what we mean by the "democratic way of life."

Children are born into this functioning state and must be led to an acceptance of it and to an understanding and appreciation of its value. Acceptance implies conformity to its principles, customs, and laws. Understanding and appreciation imply perpetuation and improvement. These are responsibilities delegated to the schools, and hence teachers serve as agents of the state in accomplishing these ends.

The Church.—Throughout all ages and in all parts of the earth, mankind has been concerned with the supernatural. Basic in human nature is the need to worship some form of deity and to evoke satisfying personal relationships with a socially approved and accepted form of deity. The expression of these needs is universal, and their satisfaction is found in variable religious experiences common to specific groups. The crystallized expression of religious experiences has varied significantly from age to age, and it varies among countries and among groups. For about two thousand years the Christian religion has been dominant in Western civilization. The basic tenets of the Christian faith have thus become an important part of our social heritage. The most appropriate form for the expression of religious experiences is a further variable among those adhering to the Christian faith. Group interpretations of the most appropriate forms tend to become crystallized in the beliefs and tenets of denominations and sects. Judgment as to the best interpretative form and the best set of relationships between the individual and his God obviously is not within the province of the present discussion. Here we are interested in observing the universality of religious needs and experiences and the social phenomenon of variability with respect to interpretations of expressional forms, and we are particularly interested in noting the influence that these factors have upon youth in the present social scene.

At no period in the entire life cycle do these factors play a more important role than during the years children are in junior high school. Unless we are willing to refute the entire Christian ethics as the foundation for our state, we must conclude that the schools are responsible for furthering the acceptance and application of these principles among children, *insofar as this may be done without interfering with the major responsibility of the church and the home.* All too frequently, however, any serious attempt to do this at once comes into conflict with denominational interpretations and hence tends to cause additional conflicts and problems for youth.

Industry—Industry as a social institution, is that body of traditions and customs that is built around employer-employee relationships, with all their pervasive ramifications in modern society. Since the beginning of tribal life, men have cooperated with each other with varying degrees of success and uniformity to secure necessary food, clothing, shelter, and comforts. Out of such sharing have grown all trade, commerce, and industry as we know them today. The customs, traditions, and laws of industry—in theory, at least—purport to be the most satisfactory means yet devised to meet the common needs of man. New problems and needs have grown out of changed conditions as we have emerged from an agricultural age and entered into an industrial age.

The fact that we may observe a dislocation of forces, with widespread inequalities and injustices arising from the tendency to perpetuate agrarian traditions and customs in the solution of new industrial problems, does not negate the existence of industry as a social institution, but rather, these factors emphasize the transitional character of all social institutions. The manifold industrial changes of the present century create problems that may not be confined to industry alone. Problems of the production, distribution, and equalization of the national wealth notably influence all aspects of life with a resultant disruption of established customs in all social institutions.

The employer-employee relationships that each family has established in the ever-changing present social scene have marked influence upon the developmental possibilities of children living in the family. Some of the familial influences of a differential economic status are noted in a later section of the present chapter.

Institutional Demands—Under a dictatorship the form and the functions of all social institutions tend to be fixed autocratically. Individual and minority-group interests and interpretations are

ignored. In fact, all individual human values are subordinated to the welfare of the state, and hence, under a dictatorship, there is minimal conflict among the prevailing customs and practices of social institutions. In a democracy, however, there is freedom to interpret the nature of one's individual problems and to evaluate the contribution of conventional customs in their solution. This fact results in two outstanding characteristics of democratic social institutions: change and variability. Institutional changes create new problems that may not be solvable by traditional methods. This general condition weakens the dominance of the institution until new forms are accepted. Variability in the definition of personal and group needs likewise weakens the compulsory nature of institutional demands upon the individual. Together, these factors tend to promote social progress, but they have the incidental effect of creating additional conflicts and problems for youth. Nevertheless, even in a democracy, the forces of tradition are strong, and individual freedom to choose new ways of solving individual problems does not imply a license to impair the welfare of the group.

In observing the influence of our social institutions upon the personal development of children, we should note that the individual is born into a family and a state that are relatively fixed and that there is little he can do individually to change these conditions. The first and most important adjustments must be made to the particular family into which he is born. The relationships that exist among other members of the family, their ideals, attitudes, tensions, and maladjustments all tend to become a part of his life. Similarly, the economic, religious, and educational nature of the home exerts a profound influence over the child during his earliest developmental years. The community into which he is born and in which he spends his early years likewise exerts a strong influence over him. Not only is the total community influential but the particular section of the community into which the individual happens to be born and in which he is reared tends to mold him into the pattern of those about him.

As persons grow and become definite members of each social institution, these demand conformity and adjustment to the prevailing standards and customs as the price of being accepted into the group. During childhood and early youth, the initial interpretation of prevailing standards and customs of social institutions, together with appropriate behavior adjustments, must be guided by parents and by teachers. In a lesser degree, interpretations and adjust-

ments are influenced by child society and by impersonal factors in the community. Each individual child thus is confronted by multitudinous demands for conformity that challenge his highest intelligence, patience, and emotional stability.

Institutional Conflicts—The resourcefulness and adaptability of the human organism is so great that adjustments might be made even to these multitudinous institutional demands if each institution were unrelated to any other or if adjustments within one institution facilitated adjustments within another. To complicate this problem still further, however, we find that the demands of one institution conflict with those of another institution. Thus, for example, the church advocates the doctrine of brotherly love, whereas industry has been permeated with unscrupulous ethics that largely ignore the welfare of individuals unable to care for themselves under strenuously competitive conditions. Similarly, the principle of brotherly love is violated by demands of the state under war conditions. Thus, too, out of industrial relationships have grown demands for high standards of living that conflict with biological demands of the family to rear children. Similarly, current economic conditions tend to prevent youths from earning sufficient incomes to marry and establish homes of their own at an age when marriage seems most appropriate.

Numerous instances might be cited to illustrate the conflicting demands of social institutions upon adults and youths. If the personal conflicts growing out of opposing demands of different social institutions were all of the social adjustments required of individuals, the task still would not be so inordinate, but further conflicting demands are made within each social institution itself. Thus the church advocates universal fellowship, yet local churches frequently restrict membership to the dominant racial group. Our state is based upon the concept of universal free suffrage, yet many of our only true Americans, the Indians, are denied this right. Then, too, legally youths attain full citizenship rights and responsibilities at the age of twenty-one, but in most states they become criminally responsible at sixteen years of age. One of the principal objectives of education is the development of character and personality, yet secondary schools throughout the land generally reward pupils almost exclusively with school marks based on academic achievement. The child learns to love and respect both parents, yet the increasing number of broken homes reveals the tensions and conflicts that must have preceded these separations. Current

struggles of rival labor unions to represent the best interests of all workers is an instance of conflict in industry. Innumerable conflicts thus arise within each social institution, involving personal conduct and personal adjustments to the opposing standards, values, customs, and loyalties of the primary and secondary social groups within which the child must learn to live.

Institutional Progress—The concept of social progress has come to dominate a major portion of our social thought. In the preceding sketch of our complex social matrix, the framework is the group of five basic social institutions that have no material or organic form but that live in the opinions, beliefs, and philosophies of members of society. The basic function of these institutions is to solve problems common to the group. Since life itself is ever-changing and since the tempo of change has been vastly increased within recent years, marked changes in these institutional forms are demanded by new personal and group problems, at the same time, these changes are resisted by public opinion. Yet because of the very nature of social institutions, social progress may be achieved only through the evolution of more effective forms and relationships. One of the two ultimate objectives of all education is to achieve the best possible institutional progress. Under this concept the school has a long-range responsibility for achieving social progress. There are, however, other agencies in each community that are concerned with specific adjustments caused by institutional conflicts and new or changed conditions. Included among such agencies are private and public welfare and philanthropic organizations, character building agencies, and various types of improvement societies that represent cross-sectional interests of the community. Such agencies are concerned with correcting and preventing maladjustments and misery within the local community. The effectiveness of the schools in furthering the adjustments of pupils will necessarily depend in large measure upon the coordination of all community efforts.

BIOSOCIAL CONFLICTS

All human behavior is purposive. Consciously or unconsciously everything we do is directed toward some end. Consequently any understanding of the behavior of junior high school pupils must be based upon a knowledge of their purposes. Often these are obscure and seemingly unrelated to the actions of pupils, but there are certain basic drives that are continuously affecting them. The interpretation of these drives provides important clues to pupil behavior.

The preceding discussion has mentioned briefly certain powerful biological drives that determine satisfying behavior patterns. These are the foundational appetites and aversions with which the organism faces life. Their power is inexorable and must be respected throughout life. Next was presented a sketch of our complex society, which pursues its ends through five major institutions that demand appropriate adjustments to the prevailing customs and mores of the group.

Individuals do not live first as biological mechanisms and then as social individuals, but they must live as biological organisms in the

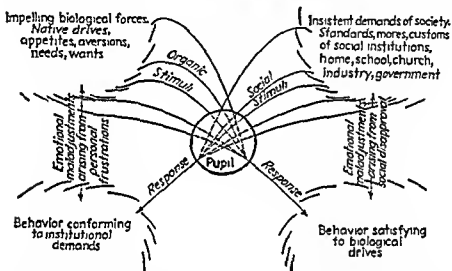


FIG. 23.—Bio-social sources of personal frustrations and emotional maladjustments.

social order. Thus two sets of stimuli are continuously influencing all behavior: organic stimuli and social stimuli. Since these interact upon one another, we may think of them as biosocial in nature. Derived from the interaction of the specific demands of social institutions and specific organic needs are two of the strongest human drives: the need for social approbation or approval, which, in turn, involves acceptance by the group, together with its respect, good will, and admiration; and the desire for power or control over things, forces, and people.

Children are protected from many of the insistent demands of society by the home that likewise provides the basic organic needs. As they approach puberty and as they continue to develop through adolescence, youth are held increasingly responsible for their acts and for the satisfaction of their own biosocial needs. Since the

majority of children reach physiological maturity while they are in the junior high school, they are compelled to make many determinative initial adjustments during these years. The difficult adjustment problem that each child faces is presented diagrammatically in Fig. 23. This figure indicates that organic stimuli tend to cause behavioral responses that are satisfying to biological needs and similarly that social stimuli tend to cause behavior conforming to institutional demands. The diagram indicates further that there are two sources of emotional tension and emotional maladjustment among pupils. One of these is found in the social disapproval of behavior that is satisfying to the biological needs of the individual when this behavior is not also approved by social custom. The other source of emotional maladjustment is found in the personal frustrations growing out of behavior that conforms strictly to institutional demands and fails to satisfy organic needs. All emotional tensions, maladjustments, and behavioral problems may be placed in this framework. All behavior adjustments should be approached from this naturalistic point of view that considers the behavioral reactions of children as normal reactions to abnormal situations. The crucial problem for children thus becomes one of learning to satisfy their needs, whether biological or social or both, in socially approved ways. This problem must be shared with the school, so that one of the primary responsibilities of teachers becomes that of helping pupils discover and use increasingly appropriate ways of solving personal problems.

CULTURAL DIFFERENCES

From a brief sketch of institutional relationships, it is hardly possible to gain a clear understanding of the magnitude of the cultural differences in the backgrounds of junior high-school pupils. Accordingly, the following pages present in more detail certain glaring socioeconomic differences that are commonly observed.

The Melting Pot.—In most communities, local elementary-school boundaries tend to be drawn about small and relatively homogeneous residential sections of the community. Consequently the pupils in many elementary schools have home backgrounds that are fairly similar. On the other hand junior high schools draw their populations from several adjoining elementary schools and thus become considerably more heterogeneous with respect to racial, socioeconomic, and associated factors. Thus, for the first time, in junior high school, we may find associated together on a footing of

theoretical equality, children from the privileged "hill" sections of the community and children from down "across the tracks", children from homes with high cultural standards and children from homes that are relatively barren of culture, beauty, and comfort, children from high-delinquency areas, with their lower moral standards, mingling with others from homes maintaining high Christian ethics, morals, and ideals, and, as a further complicating condition, we find associated together children from various racial and national stocks. All these factors tend to accentuate the adjustmental problems of the junior high school and render more difficult the final educational outcomes that are charged to this unit of our school system.

On the whole, new teachers are being recruited from homes that are markedly above average in socioeconomic and cultural factors. This condition is a desirable one, for there is neither time nor opportunity in teacher training institutions to compensate for a lack of developmental opportunities in childhood or to build up broad cultural backgrounds and experiences so desperately needed by teachers if they are to serve as the inspirational leaders in the movement toward the better life. Nevertheless, persons who have lived sheltered lives, unexposed to the misery and barrenness of extreme poverty and deprivation, are likely to find themselves unsympathetic with the personal problems and needs of children from poor homes.

Occupational Differences — The fact that fathers of junior high-school pupils are engaged in different occupations is an important background factor in the lives of the pupils. Apart from strictly cultural influences of the various occupations, the family income, the

TABLE XI — PERCENTAGES OF MALE WORKERS IN THE UNITED STATES, 1930*

Occupational Class	Percentage
Professional	3.9
Managerial, business, clerical	21.8
Skilled labor	16.1
Semiskilled workers	14.3
Unskilled workers	18.8
Farm workers	25.1

* Adapted from NATIONAL RESOURCES COMMITTEE *The Problems of a Changing Population*
p. 74 U. S. Government Printing Office Washington D. C., May 1935

character of the house, the number of people living in it, the type and amount of physical comfort all are more or less directly related to the developmental opportunities of children within the home.

Of interest in this regard, then, is the percentage of persons engaged in various broad occupational classes in the United States. In Table XI these data are shown for six broad occupational groupings. It is noteworthy that approximately one-third of all employed male workers in the United States today are unskilled and semi-skilled and that less than 4 per cent of male workers in the United States are in the professional classes. The average annual income for skilled laborers, as given by Clark,¹ is approximately \$1,430, that for unskilled workers is \$795, that for farm workers is \$485. The

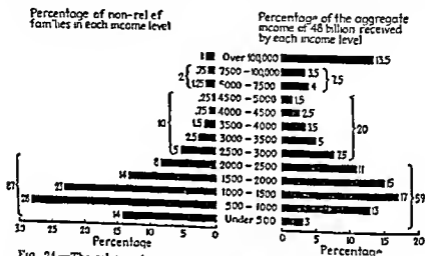


FIG. 24.—The relation between the percentage of nonrelief families and the percentage of aggregate income received. (Based on data from *Consumer Incomes in the United States* National Resources Committee U. S. Government Printing Office Washington D. C. 1938)

National Resources Committee reports the percentage of nonrelief families earning total annual incomes in the various income levels shown in Fig. 24. This committee estimated that the number of families in the United States for 1940 is 34,367,600.² From Fig. 24 it is apparent that 42 per cent of all families not on relief, or approximately 14,500,000 families, received annual incomes of \$1,000 or less.

The significance of the size of the total family income becomes more apparent when it is associated with the size of families usually found in the lower income brackets and when it is interpreted in

¹ CLARK, HAROLD F., *Life Earnings* p. 5 Harper & Brothers New York, 1937.

² NATIONAL RESOURCES COMMITTEE, *The Problems of a Changing Population* p. 25 U. S. Government Printing Office Washington, D. C., May, 1938.

terms of purchasable food, clothing, shelter, comfort, luxuries, and recreation. The California State Department of Social Welfare standard budget to provide adequate care at minimum cost for a family of six is shown in Table XII. The food standards are those set by the Family Welfare Association of America.

TABLE XII—URBAN BUDGET FOR FAMILY OF SIX*

Items	Individual allowances per month	Family allowances per month
Food	Father \$ 9 88	\$ 54 42
	Mother 8 58	
	Child, 1-2 years 6 73	
	Child, 6-8 years 7 52	
	Boy, 9-12 years 9 40	
	Boy, 13-18 years 12 31	
Clothing	Father 3 59	16 45
	Mother 3 42	
	Child, 1-2 years 1 31	
	Child, 6-8 years 2 10	
	Boy, 9-12 years 2 50	
	Boy, 13-18 years 3 53	
Rent		25 00
Utilities	Electricity 1 64	7 37
	Gas 2 16	
	Heat 0 82	
	Water 2 25	
	Garbage 0 50	
Household operation	Cleaning supplies, sundries, mending materials general household articles, linens, emergency, medical, incidentals	5 97
Education and incidentals		2 75
Total for month		\$ 111 96
Total for year		\$1,343 52

* Adapted from *Budget for Aid to Needy Children, Urban Area, State of California Department of Social Welfare, San Bernardino County, California, November 1939*

It should be noted that the minimum adequate social welfare budget for a family of six calls for an annual income of \$1,343 52,

which is greater than the annual income received by approximately 42 per cent of all nonrelief families in the United States

Even when allowances are made for fluctuations in the cost of commodities in various sections of the United States, it is apparent that a large number of families receive insufficient incomes to provide adequately for children in the home. Budget cuts will have to be made by such families in relation to the total local situations. The prudence with which such cuts are made will determine in part the total influence that these factors will have upon children. According to most reliable estimates, there are six million malnourished children in the United States today.¹

Size of Family—Another difference that should be noted in the socioeconomic background of advantages and disadvantages of school children is the inverse relationship between family income and the number of children in the home. The estimated net reproduction rates for broad occupational classes, as given by Lorimer and Osborn, are reproduced in Table XIII. In general, investigations

TABLE XIII—ESTIMATED NET REPRODUCTION RATES PER GENERATION OF BROAD OCCUPATIONAL CLASSES BASED ON UNITED STATES BIRTH, STILL-BIRTH, AND INFANT MORTALITY STATISTICS, 1928*

Occupational Classes	Estimated Net Reproduction Rate per Generation
Unskilled	1 17
Agriculture	1 32
Semiskilled	1 03
Skilled	1 06
Business and clerical	0 85
Professional	0 76

* LORIMER, FRANK, and OSBORN, FREDERICK, *Dynamics of Population*, p. 74. The Macmillan Company, New York, 1934.

reveal a negative correlation between the fertility of urban families and the level of occupational status. That is, the fertility of urban families increases in the lower occupational levels, with the greatest difference being noted between unskilled laborers and the professional class. Several studies² show consistently that recipients of

¹ For a more detailed discussion, see Chap. VI.

² STENSTRIKER, E., and PERROTT, G. ST. J., "Sickness, Unemployment, and Differential Fertility," *The Milbank Memorial Fund Quarterly*, Vol. XII, pp. 126-133, April, 1934. STOUTER, SAMUEL A., "Fertility of Families on Relief," *Journal of American Statistical Association*, Vol. XXIX, pp. 295-300, September, 1934. NOTESTEIN, FRANK, "The Fertility of Population Supported

relief are more fertile than the general population and that, in general, fertility rates are higher in the underprivileged groups than in the higher income levels

Parental Intelligence.—Parental intelligence is another influential factor in the social heritage of children in school. The distribution of the mental abilities of parents tends to follow the normal curve in just the same manner as the mental abilities of pupils themselves. Thus we may expect to find among parents a few exceedingly brilliant persons and a few exceedingly dull ones, with the vast majority clustering around the average. Studies indicate that the average adult has a mental age somewhere between 14 and 15 years. This means an ability to perform intellectual tasks that can be performed by average thirteen-, fourteen-, or fifteen-year-old children. It should be remembered that these are the characteristic ages for children in the eighth and ninth grades of the junior high school. Because of extensive social experience, adults have learned to behave in ways that cover up the true nature of their mental abilities. Teachers are sometimes misled by casual contacts with parents. Personality factors, social mannerisms, and social and economic position in the community all too frequently influence the teacher's judgment. Such errors lead to faulty expectations with respect to the home influences and the help that pupils may expect from their parents. In some cases these expectations are too high, in others they are too low. In the absence of clinical records based upon mental tests of earlier years, there is no reliable way of determining parental intelligence.

Probably the most adequate study of adult intelligence in relation to occupational status was made from the Army Alpha psychological examinations during the First World War.¹ These data, and in general, other studies of a less comprehensive nature, are consistent in revealing that adult intelligence varies with occupational status. On the average, the higher the occupational grouping the higher the intelligence, and conversely. It should be emphasized however, that there is no sharp division of intelligence between any one occupational class as compared with another class, rather, there is a wide overlapping among all occupational groups. Another

by Public Relief," *The Milbank Memorial Fund Quarterly* Vol. XIV, pp. 37-49, January, 1936. PEARL, RAYMOND, "Some Data on Fertility and Economic Status," *Human Biology*, Vol. IV, pp. 525-553, December, 1932.

¹ YERKES, R. M., "Psychological Examining in the United States Army," *National Academy of Science, Memoirs* 15, 1921.

approach has been made to the study of parental intelligence through analysis of pupil intelligence when these are grouped according to the occupations of fathers. One such classification was made by Terman and Merrill¹ in connection with the revision of the Stanford Binet Mental Test. An adaptation of these data is shown in Table XIV. It is apparent from this table that on the whole there is a difference of about 20 points I Q between children of day laborers and those from professional homes. The percentage of children having various intelligence quotients were also classified by Haggerty and Nash according to the occupation of parents.²

We have noted marked variations in family incomes associated with different occupational levels. These variations were found to be negatively correlated with the size of the family and positively correlated with the intelligence of the parents. A striking combination of intelligence, occupational status, and fertility were presented by Lorimer and Oshorn.³ This was done by estimating the distribution of intelligence quotients of United States school children in

TABLE XIV—MEAN INTELLIGENCE QUOTIENTS (L-M COMPOSITE) ACCORDING TO FATHER'S OCCUPATION*

Father's occupational classification	Chronological ages	
	10-14	15-18
1 Professional	117.5	116.4
2 Semiprofessional and managerial	112.2	116.7
3 Clerical, skilled trades, and retail businesses	107.4	109.6
4 Rural owners	92.4	94.3
5 Semiskilled, minor clerical, minor business	103.4	106.7
6 Slightly skilled	100.6	96.2
7 Day laborers, urban and rural	97.2	97.6

* Adapted from TERMAN, L. M., and MERRILL, M. A. *Measuring Intelligence*, p. 48. Houghton Mifflin Company, Boston, 1937.

two successive generations on the basis of the Haggerty and Nash data and the number of births by occupational classes. These estimates are reproduced in Fig. 25, which projects the proportionate

¹ TERMAN, L. M., and MERRILL, M. A., *Measuring Intelligence*, p. 48, Houghton Mifflin Company, Boston, 1937.

² HAGGERTY, M. E., and NASH, H. B., "Mental Capacity of Children and Parental Occupation," *Journal of Educational Psychology* Vol. 15, p. 572, 1924.

³ LORIMER, FRANK, and OSHORN, FREDERICK, *Dynamics of Population*, p. 100. The Macmillan Company, New York, 1934.

changes in the number of children coming from homes in different intelligence classifications for the first and for the second generations. In Fig. 26 this concept is applied to the percentage of

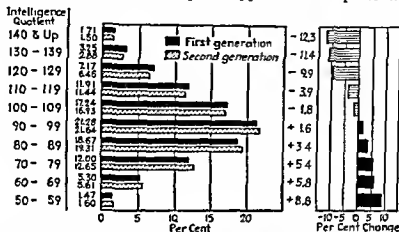


FIG. 25—Influence of differential reproduction among social classes on expected distribution of intelligence quotients of United States school children in two successive generations (From Lorisner, Frank, and Osborn Frederick, *Dynamics of Population*, The Macmillan Company, New York, 1934)

Percentage of Workers in Broad Occupational Classes

Expected Percentage Population Change on the Basis of Present Reproduction Rate

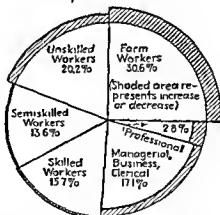
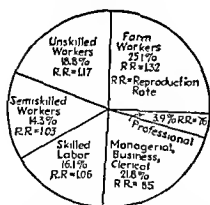


FIG. 26—Diagram showing the percentage of male workers in broad occupational classes, projected to the next generation on the basis of present reproduction rates (Data from Tables XI and XIII)

employed workers in each broad occupational class by projecting the population ratio for the next generation, based upon Osborn's reproduction index, as shown in Table XIII. Changes observable in Fig. 26 make no assumption of intelligence but show merely the population changes within each occupational group, under the

assumption that children of the next generation would follow the occupations of their fathers. Together, Figs. 25 and 26 suggest rather clearly changes that may be expected if present trends continue unchecked.

Other Factors—Two other important factors that contribute to the influence of home backgrounds of junior high-school pupils are the education of the parents and the relationship between the education of the parents and the number of children in the home. In general, positive correlations are found between the intelligence of parents, their occupational status, and their education. Thus parents with the least education have the lowest intelligence and are in the lowest occupational classification. Numerous studies substantiating these conclusions are summarized by the National Resources Committee,¹ which reports a relatively high negative correlation between education and fertility and a positive correlation of .62 between fertility and illiteracy. Similarly, parental groups with only a common-school education are found to be consistently and conspicuously more fertile than those with a high school and college education.

In general, the statistics of population indicate (1) positive correlations between the size of the family, income and the occupational status, intelligence and occupational grouping, intelligence and education, and (2) negative correlations between income and the number of children in the family, occupational status and the number of children in the family, and parental education and the number of children in the family. Stated in a different way, these relationships find associated together low income, low culture, low intelligence, low occupational status with a large number of children in the family, and high income, high culture, high intelligence, high occupational status with a small number of children in the family. It should be remembered that these are relationships applying to groups among which there is obviously much overlapping. Such overlapping, however, does not obviate the significance of these general conditions. Where urban populations are at all average or typical of the nation as a whole and where junior high schools represent a cross-sectional sampling of these urban populations, teachers may expect to find variable factors in the home backgrounds of their pupils not unlike those suggested here.

The family income, the parental intelligence, the education, and the occupational status are only a few of the differential factors that

¹ NATIONAL RESOURCES COMMITTEE, *op. cit.* p. 145

must be considered in the background differences among children. In addition to these, there are numerous less tangible but nonetheless powerful psychological factors, originating in part from socioeconomic conditions and in part from defective heredity, that contribute in large measure to family tensions and emotional conflicts in the home. Studies of family disorganization suggest that the basic sources of friction are to be found in differences in emotional dispositions, philosophies of life, personal habits and behavior patterns, and in varying degrees of neurosis and psychosis. Further family tensions likewise result from deprivations associated with the intellectual, occupational, and social status of the family, from disparity in the ages of parents, from ill-health, from the presence and interference of in-laws in the home, from parental attitudes toward children, from religious differences, and from a vast array of attitudinal and emotional differences among members of the same family. In large measure, the causes of eccentric and problem behavior so commonly evidenced by junior-high school pupils are to be found in the home backgrounds and experiences of children. The present discussion has stressed the associational relationships of depressing influences on the pupil because of the prevalence of this vicious cyclical combination of influences. It must be remembered, however, that poor psychological homes may be found in any socioeconomic classification. And similarly, many excellently adjusted homes may be found among families in the lowest occupational group. Nevertheless, available evidence would suggest that when pupils exhibit various forms of antisocial behavior, one of the most likely places to look for causes, is in the home.

SUMMARY

Certain basic needs and drives of pubescent pupils are highly determinative of pupil behavior. Among these are the need for independence, the need for group approval and group membership, the need for adequate heterosexual adjustment, and the need for an adult recognition of maturity status. Growing out of all these is a further need for an exploratory discovery of appropriate means of solving problems that have their sources in these basic needs. The biosocial needs, wants, and longings of pubescent pupils demand satisfaction in a specific social context, and hence a knowledge of the underlying social patterns is of importance to junior high school teachers. These patterns are found in five basic social institutions: the family, the school, the state, the church, and industry. The

current prevailing standards and customs of these institutions constitute the important nonmaterial social heritage of the race. The basic function of all social institutions is that of facilitating the satisfaction of individual and group needs and wants.

Two essential characteristics of democratic social institutions are their transitional evolutionary nature and their interdependence. These characteristics emanate from two sources: the changing needs of individuals and the changing needs of society. In spite of the variable interpretations placed upon the nature of individual and group needs and the variable selection of ways of solving these needs, the force of tradition remains strong and hence each social institution makes its demands upon all individual members of society.

The demands of one institution often conflict with those of another institution, with the result that youthful members of society are unable to interpret socially approved behavior patterns. Conflicts are observable not only among social institutions but within each social institution, thus complicating still further the social demands made upon pubescent children.

Basically, the sources of all emotional tensions and maladjustments are to be found either in the social disapproval of behavior that is satisfying to the biological needs of the individual, when such behavior is not approved by social custom, or in personal frustrations growing out of behavior that strictly conforms to institutional demands but fails to satisfy organic needs. Resolving such tensions and preventing the development of further tensions must be accomplished through adjustments, sublimations, and compromises that satisfy the most insistent biosocial demands. The extreme importance of the initial adjustment patterns emphasizes the strategic position of the junior high school as an agent of the state in promoting the wholesome adjustment of all pupils.

Specific cultural differences in the home backgrounds of junior high-school pupils exert strong influence upon them. Parental occupation, family income, size of the family, parental intelligence and education together with an array of psychological factors, tend to create a vicious depressing cycle of influences that in large measure determine the educational needs of individual pupils.

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PART II

*Adjustment: A Central Problem of Junior-high-
school Education*

CHAPTER V

ADJUSTMENT THROUGH THE GUIDANCE PROGRAM

Preceding chapters have emphasized the importance of adjustments needed in junior-high school education. Considered in its broadest sense, adjustment is synonymous with the total educational procedure. But the more specific adjustment services of schools are being coordinated through the guidance program. Within the junior high school, the guidance program is usually directed by the principal, who is assisted by counselors and specialists as well as by homeroom teachers and regular class teachers.

THE NEED FOR GUIDANCE

The need for guidance is greater today than a generation ago, because far-reaching industrial and social changes have created new adjustmental problems and because public consciousness of the responsibilities of the school demand increasingly effective personal and social adjustments of all pupils as outcomes of the school program.

General conditions affecting the personal and social adjustment of junior-high school pupils may be found in the increasing urbanization movement, in shifting social and moral standards, in socioeconomic conditions, and in parental relationships and controls. During the junior high school years, the problems of personal and social adjustment become more pronounced with the onset of pubescence, with the ever-widening social horizons of pupils, and with the manifold problems growing out of the struggle to attain a secure place in a rapidly changing society. Within recent years educators have accepted a major responsibility for helping junior-high school pupils make these adjustments. These added responsibilities are among the newer functions of the guidance program.

Change is characteristic of the current industrial and economic scene. In every occupation and in all industries, technological changes are occurring with increasing rapidity. Change in one social institution, such as industry, necessitates adjustments within other social institutions, as, for example, in the home, the school, and

government. The school must help pupils adjust to changing industrial conditions, and it must prepare pupils to enter into adult occupational life. Although the acquisition of specific occupational skills is most appropriately placed at the post-high-school level, the junior high school must share a significant part of the responsibility for preliminary occupational exploration and adjustment. This responsibility is shared by all classroom teachers, but planning and coordinating suitable procedures is a function of the guidance program.

Public consciousness of a responsibility for universal education of all children has grown throughout our evolutionary educational history. At no time in our history has this consciousness been more pronounced than at present. Whereas a generation or two ago little responsibility was felt for the education of all children, now public welfare is believed to be intimately related to the education of all children. Our present educational philosophy demands that all attend school and that the schools provide opportunities suitable to the developmental needs of each child. In large measure, the realization of a universal education that is adjusted to the needs of all children is dependent upon the services of guidance personnel.

Growing out of the many social and industrial changes are new problems associated with increased school populations that are considerably more heterogeneous with respect to their interests, needs, and aptitudes. To meet the more diverse needs of pupils, our schools must provide a wider range of differentiated curricular offerings. Helping children choose the most suitable educational offerings of the school, that is those which are indicated by individual needs, thus becomes an important new problem of educational guidance.

Modern education places an increasing emphasis upon the development of sound health in all pupils. Adequate provisions for health are among the newer services of our schools. Health programs, being both remedial and preventive in nature, call for constant supervision and modification as these are indicated by the health and developmental status of each pupil. Helping pupils develop individual regimens that contribute to their physical well-being is a further aspect of guidance work.

Guidance Defined —In citing reasons why guidance has assumed a position of increasing importance in modern education, four related aspects of guidance were mentioned. These are vocational guidance, personal-social guidance, educational guidance, and health

guidance Procedures of guidance involve the application of the most refined techniques of human engineering in discovering the diverse needs and problems of pupils, so that guidance personnel may use the greatest wisdom in guiding human destiny One school lists the following underlying principles for its guidance program

- 1 The study of boys and girls as individuals in relation to their social environment
- 2 The development of a constructive plan by which each student may
 - a Obtain necessary information with respect to the situation and problems which he meets
 - b Make significant choices
 - c Forecast a program, and
 - d Make adaptations to meet his changing interests and needs
- 3 The utilization of resources within the school, home, and community in order to
 - a Prevent maladjustment
 - b Remedy the effects of previous maladjustment
 - c Encourage constructive development of adolescents as individuals and as members of social groups¹

Guidance may be conceived as *the coordinated effort of the school and community to build wholesome adjusted personalities that are ready to enter into adult life with optimal prospects for success and happiness* How, then, does guidance differ from education?

Educational procedures that are directed toward the adjustment of pupils, that is, toward the development of effective personalities, are in reality guidance procedures Viewed in this broad sense, all education is guidance, since the purposes of guidance are identical with the ultimate objectives of education

The specific skills, knowledges, habits, and attitudes, which too commonly are conceived as the ends of education, should be reinterpreted as means of helping pupils toward some ultimate development Any theoretical differentiation between education and guidance, then, must be made only in the hierarchical relationships of the means employed and not in the objectives However, at present, a practical distinction commonly is made between formal instructional procedures and the newer guidance procedures The specific newer efforts of schools to orient, adjust, advise, and guide pupils toward the realization of their potentialities have not yet

¹ BROWN, MARION, *Handbook for Counselors in University High School*, mimeographed, Oakland, Calif., 1939

become wholly accepted by subject teachers as a part of their own responsibility or as the ends toward which they should work. In time, it is probable that such discrepancies will be resolved and that all teachers will accept their newer role as guidance specialists, using the best of available means to develop pupils.

In the organization of modern education, both experienced and beginning teachers are partially restricted to the use of traditional subjects as their basic means of developing pupil personalities. The necessary newer steps in guidance that must be taken by the school tend to be added on or appended to the regular duties and responsibilities of teachers. But too commonly teachers fail to appreciate the nature of these newer guidance responsibilities and their relation to the total program of the school. It is the purpose of the following sections of this chapter to point out important steps, functions, and relationships in guidance procedures in modern junior high schools.

INITIAL STEPS IN GUIDANCE

The intimate relationship between special guidance services and other aspects of education is suggested by the procedures that are used for the adjustment of pupils. Three necessary initial or preliminary steps must be taken by schools before an effective guidance program can be put into full operation. These are (1) the collection of data, (2) the orientation of pupils, and (3) the grouping of pupils.

Collection of Data—Before educators attempt to guide pupils in the adjustment of their personal problems, or undertake to advise them regarding desirable or needed avenues of development, it seems only natural that educators should try to know pupils as intimately as possible. Logically, the first step in guidance is that of collecting and interpreting information about pupils. Because of the varied types of data that are needed, the various sources from which these data must be collected, and the various times of collection, it is desirable for schools to develop a systematic plan for recording and using all the information that can be secured about pupils. In collecting data, however, striking differences may be observed in the practices of different schools.

Cumulative Records—There is considerable evidence to support two guiding principles for the collection of data on pupils. These have been well stated by Ruch and Segel as follows:

- 1 The record of any trait of an individual over a period of years is more significant than the record of that trait taken at any one point.

2 Estimates on many different traits afford a much more accurate picture of the person's educational and vocational possibilities than the estimate of a single trait ¹

A part of the evidence substantiating these principles was first presented by Keys,² who studied the predictive value of a test item over a period of time. Supporting evidence of another kind is derived from the experience of child guidance clinics using clinical methods. The success of guidance clinics in the diagnosis of individual difficulties seems to depend largely upon the availability of objective measurements of a large number of factors. Effective guidance programs in the junior high school adapt both of these principles through their measurement programs and through the use of cumulative records that include those items and data found most useful in studying pupils.

In discussing the essentials of the individual inventory, Ruch and Segel make the following summary statement:

The individual, or personal, inventory is essentially an array of those facts about a pupil that distinguish him as an individual apart from others. It must take into account a wide range of such factors as physical development, health, mental characteristics, educational achievement, social backgrounds, interests, and special talents. It is the school's formal record of its efforts to discover and capitalize the individual differences among pupils.

The individual record may be a card, booklet, or a folder. It should be cumulative, and it should follow the pupil from grade to grade and from school to school. It should be a growing record, subject to periodic review and supplementation because guidance is a continuous process. It should always be most available to the persons performing the duties of counselors.

Guidance may be based upon a series of "checking levels" such as the levels of school entrance, the conclusion of the primary unit, the pre-secondary level, and the secondary level. There are data appropriate to each of these levels that should be recorded on the individual inventory and used for guidance purposes.³

Although as yet there is no widespread uniformity in the use of items for guidance, experts agree that data on the following items should be included in the cumulative record of each pupil:

¹ RUCH, G. M., and SEGEL, DAVID, "Minimum Essentials of the Individual Inventory in Guidance," *Occupational Information and Guidance Series No. 2*, Vocational Division Bulletin 202, pp. 27ff, U. S. Office of Education, 1940.

² KEYS, NOEL, "The Improvement of Measurement through Cumulative Testing," Teachers College, Columbia University, *Contributions to Education* 321, 1928.

³ RUCH and SEGEL, *op. cit.*, p. 18.

FAMILY AND SOCIAL BACKGROUND—The data that are essential here are those usually used by social case workers in developing case histories. Data for school records are gathered by counselors often in collaboration with social workers. Obviously, these data are confidential and must be revised as family conditions change.

PHYSICAL AND MEDICAL HISTORY—Most schools make periodic physical examination of children, but too commonly these data are not made readily available to counselors and teachers. The cumulative record should include the physical-examination data found by the school physician and be supplemented with reports from the family physician.

SCHOOL MARKS—School marks are important in guidance. This is true in spite of their unreliability as measures of achievement in school subjects and in spite of the wide variability in marking practices observable among teachers. School marks often are based upon personality factors as well as upon subject achievements. School marks correlate higher with other school marks than with any other single criterion. Evidently whatever it takes to secure high marks tends to persist from grade to grade, and hence school marks possess a significant predictive value that is highly useful in guiding pupils. Analyses of school marks often reveal areas wherein adjustments are needed. Variation between school marks and other pupil data may suggest sources of difficulties and needed adjustments. It is highly essential, therefore, that school marks be included as a part of the cumulative record.

INTERESTS AND EXTRACURRICULAR ACTIVITIES—One of the best ways of discovering the interests and special abilities of pupils is to observe their voluntary activities. The junior high-school age is one of naturally expanding and enlarging horizons, in which pupils come into contact with new ideas that develop into new experiences and create new and dominating interests. Records of voluntary activities aid in understanding pupils and in helping them enlarge the scope of their interests. Cumulative records of the recreational and exploratory activities of pupils thus become significant guidance data.

MENTAL-TEST SCORES—Scores earned on mental tests possess considerable value to guidance personnel and should be included as a part of the cumulative record. As with other measurements of pupils, mental test scores tend to stabilize upon repetition. Certain advantages and weaknesses of mental test scores are discussed in Chap. III.

ACHIEVEMENT-TEST SCORES—Effective educational guidance in large measure affects the achievement of pupils in various school subjects, and their achievement is a factor that influences the guidance needed. Standardized achievement-test scores constitute the best single measure of subject accomplishment, they reveal areas of weakness in which remedial work is needed, they serve as a useful guide in classifying pupils and in organizing instructional activities. Since, on the average, mental-test scores and achievement-test scores are positively correlated, scores in one field may be used to check scores in the other. This relationship, however, is not close enough to justify substituting achievement-test scores for mental test scores.

SPECIAL TALENTS—Provisions should be made in the cumulative record for evidence on the special talents and accomplishments of pupils as well as for unusual disabilities and weaknesses. Often such records are most revealing of traits and aspects of personality that are not easily discovered through other pupil records. Biographical sketches and systematic anecdotal records are effective ways of collecting data on the special talents and interests of pupils.

SOCIAL AND CHARACTER RATINGS—Most of the more important areas of pupil behavior during the junior-high-school age involve adjustments in social situations that require an effective integration of personality traits. Development in these areas is commonly included among the objectives of junior high schools, and hence records of social successes and failures are needed for effective guidance. As yet measurements of personality adjustments, including character traits and social competence, are more reliable than valid. Nevertheless, the best available appraisal instruments in these areas serve to reduce the subjectivity of estimates and judgments, and hence their use is to be encouraged. Too often, however, teacher judgments of social and character traits are based solely upon unsystematic subjective impressions influenced by personal prejudice and bias. By means of rating scales, systematic anecdotal records, and the best semiojective tests that are available, improved and fairly accurate developmental profiles may be recorded. When included in the cumulative folders, these records are exceedingly useful in guidance.

PHOTOGRAPH OF PUPIL—A further important item that should become a part of each individual cumulative folder is a photograph of the pupil. This may be made inexpensively from 35-millimeter film and attached to the cumulative record. In large schools, this

photograph is particularly useful to counselors in associating names with pupils

RECORDS OF ATTENDANCE—For some pupils, cumulative records of attendance reveal significant attitudes and tendencies that are closely related to various behavior problems. In such cases attendance records are useful in guidance. For other pupils these records may be used as a fairly reliable health index. This can be done easily by filing the semester attendance-record card in the cumulative-record folder.

Uses of Cumulative Records in Guidance—If cumulative records are started early in the elementary school and continued systematically year by year, a considerable body of valuable information may be collected about pupils that will materially aid junior high-school teachers and counselors in planning present and future educational programs. For greatest usefulness these records should include the elementary-school data. Comprehensive cumulative records provide the best known means of recording usable data about pupils. As yet many schools have not instituted satisfactory cumulative-record folders, but several satisfactory forms are available that may be adapted to local needs.

The specific uses of cumulative records at the elementary- and junior high school level have been well summarized by Segel in the following statements:

a In the study of the needs of pupils in an instructional field

One of the most common uses of cumulative records in instruction is in connection with the *determination of the level of instruction* on which either the individual pupil or the class as a whole can succeed. If differentiation by subjects is desired, the level of the pupil's standing in a particular subject may be revealed by teachers' marks, subject test scores, and general scholastic aptitude (intelligence) test scores. Age and ratings in various character traits should likewise be studied in connection with achievement in subject matter. If the class shows a wide range of achievement and aptitude, homogeneous grouping or individualized instruction may be a wise procedure. It is always more difficult to make such grouping for individual subjects than for all subjects as a whole on the basis of general scholastic aptitude. Since the members of the group would presumably have a different standing for every subject, numerous problems concerned with program making arise with the effort to place each pupil within his proper group by individual subjects. In either case, however, the grouping should be based on a general aptitude test plus a score or a series of scores on an achievement test.

The use of items commonly found in cumulative records which aid in the study of instructional activities is well illustrated by the case of reading. The combination of scores on a general scholastic aptitude test and on a standardized reading examination, together with a consideration of the pupil's chronological age, can be most helpful in relation to the choice of books suited to his age, intelligence, and reading ability.

b In the discovery of causes of behavior difficulties and failures

For some time the child guidance clinic has demonstrated the value of an all round view of the child in analyzing his difficulties and recommending remedial treatment. The more comprehensive cumulative record systems include much of the data usually gathered by such clinics. They constitute a valuable aid to the school in dealing with problem cases.

Failure to meet scholarship requirements is a common form of maladaptation in school. It may be caused by a variety of factors, among which are (a) too rapid advancement through school, (b) lack of needed ability for the grade of work, (c) too heavy an extra-curricular program or work outside of school, (d) economic maladjustments in the home, (e) personal difficulties, and (f) poor health. Many items in cumulative records bear on these factors and frequently furnish a clue for the discovery of the true cause of failure.

c In the identification of gifted pupils

One of the greatest responsibilities of society is the discovery and encouragement of pupils who are to be its future leaders. The cumulative record, more clearly than any other school device, shows the level of development at consecutive periods of time. If for a given pupil this level is consistently maintained above that of other pupils, there is a clear indication of relative superiority which is of far greater significance than the result of any single measure or set of measures which have been applied at any particular time.

d To assist in the discovery of special abilities

Likewise a student may have some special ability which has been overlooked in carrying on the regular program of the school. The cumulative record will often give a clue to such special abilities through its entries. If, for example, a record has been kept from year to year of achievement in music or art according to the teacher's estimate or on the basis of more objective standards, a superiority in either of these fields should become evident. Any such special aptitude should, of course, be capitalized for all it is worth.

e In furnishing a basis for advising a pupil who wishes to leave school during or at the end of the junior high school period

The pupil who is inclined to leave school early is in some ways more of a guidance problem than those who continue with academic or vocational

training The cumulative record throws light upon the capabilities of such pupils over a period of years and should be of material help in advising for or against the continuance of school attendance All possibilities of part-time education and of coordination of school and work must be considered before a decision is made Although jobs for pupils 15 and 16 years of age are now relatively few, there are still enough of them available to make attractive the possibilities of wage earning to many restless young people who are not succeeding particularly well in school work A final recommendation for their future should be based only upon an exhaustive study of past achievements and failures as well as present desires The cumulative record makes an important contribution to such a study ¹

Cumulative records are intended to provide a means of making available to teachers and counselors systematic cumulative data that provide the most effective possible basis for directing pupil activities and experiences by revealing pupil weaknesses and strengths specific growth trends, adjustments and maladjustments, socioeconomic backgrounds, physical growth, and health factors that may influence their development

Even in schools where inadequate programs of measurement are maintained teachers should collect as much data as possible to aid them in guiding pupils

Orientation of Pupils—"Bridging the gap" between the eight-year elementary schools and the traditional high schools was an important function of the first junior high schools In recent years following the reorganization of secondary education, the gap between elementary and secondary education has been noticeably lessened This is true with respect to methods, units of instruction provisions for individual differences, and the general democratization of secondary education Nevertheless, significant differences commonly are found between total elementary-school procedures and total junior high-school procedures, as well as between those of junior high schools and senior high schools Equally significant differences are found between the total programs of different junior high schools

The populations of junior high schools are composed of pupils coming from schools maintaining different programs and standards with varied philosophies of education The greater proportion of the pupils in a given junior high school transfer from elementary schools within the local school district Others, however, because

¹ FEGEL, DAVID 'Nature and Use of the Cumulative Record,' pp 35-37, Bulletin 3 U. S. Office of Education 1933.

of change of residence, transfer from schools outside the district. Still others enter advanced grades of the junior high school from parochial elementary schools or from eight-year public elementary schools of contiguous districts. In some localities, the educationally retarded children of migrant families enter school late in the semester. All these pupils, coming together for the first time, must adjust themselves to each other and to the unfamiliar program of the junior high school.

The second initial step in guidance is that of promoting early adjustments within the new school. Procedures directed toward this end are called "orientation procedures." The adjustments that must be made by pupils entering the low seventh grade regularly in the fall semester are different in some ways from those facing other pupils. Consequently the orientation procedures described below are classified under two headings: the orientation of pupils entering the low-seventh grade and the orientation of other pupils.

Low-seventh-grade Pupils—Frequently graduates from several elementary schools continue their work in a single junior high school. Often these elementary districts are located in widely different environmental sections of the community. Such environmental differences increase and accentuate the adjustment problems of pupils. Whatever the school can do to lessen the disruptive shock of transferring from one school to another, whatever it can do to facilitate early adjustments to strange conditions makes for a greater continuity of experience and hence contributes to the welfare of the pupils. In the following paragraphs, several successful procedures are described that are used by schools to facilitate adjustments among pupils entering the low-seventh grade at the beginning of the semester.

VISITING DAYS—To prepare sixth-grade pupils for the transfer to the junior high school, a number of effective and interesting procedures may be used. One of these provides for a visiting day several weeks prior to promotion day, wherein committees of eighth- and ninth-grade pupils chosen by the student body are delegated to visit all sixth grade rooms in contributing elementary schools. These committees answer questions, describe the nature of the junior-high school program, show the differences between it and the elementary plan of instruction, and explain various rules, regulations, customs, and procedures of the local junior high school.

A modification of this plan is that of providing a special day during which sixth-grade pupils are taken to visit the junior high

school Here they attend low-seventh classes and an assembly, have lunch in the cafeteria, tour the school building and grounds, and in various ways become acquainted with the new school environment Such procedures, adapted to local needs, serve admirably to introduce pupils to their new school environment

ORIENTATION BOOKLET—An additional procedure that may be used on the first day of the semester, is that of presenting seventh-grade pupils with an orientation booklet The practice of using such booklets is common, but many of them are written by the principal alone in a style that verges on the comic or in a language above the level of junior high-school pupils Because of its importance, the orientation booklet is described here in some detail

The orientation booklet may be referred to as the "welcome booklet," to give greater appeal to pupils The cover may be made of colored construction paper, folded so as to make a completed booklet, 6 by 9 inches, with adequate margins for stapling Often it is desirable to make a mimeographed sketch of the front view of the junior high-school building with some such simple statement as "Washington Junior High School Welcomes You," together with the date, as, for example, fall term, 1941 This type of cover page is simple, attractive, and dignified It suggests a similar tone and style for the entire booklet

The booklet should be written the preceding semester by a committee of pupils, guided by the counselor and the homeroom teachers who are to be assigned to the incoming seventh grade and assisted by talented art pupils and an art teacher Individual articles may be written by the principal, the counselor, the office secretary, or others It should be published by pupils in the typing department under the direction of a typing teacher

The booklet should be attractively illustrated and written in a style and language appealing to pupils of the seventh grade level The entire work should be on a dignified plane, with a careful avoidance of slang and unnecessary colloquialism and unsavory cartoons

The foreword of the booklet should include a statement of how and why the booklet was written It should include an appeal to the low-seventh-grade pupils to learn about their school and to share responsibility for its improvement This foreword provides a good opportunity to inform new pupils that they are to be treated with courtesy, consideration, and friendliness from the beginning Such assurance is particularly important since many children entering junior high school for the first time are fearful of being hazed

by older pupils. Such fears should be allayed at once so that other needed adjustments may be made. In addition to the foreword, the booklet should contain the following items of information:

- 1 A list of the entire personnel of the school, with titles and positions. This list should include all secretaries, clerks, custodians, and cafeteria workers.
- 2 A plot of the building and grounds, with room numbers or other designation of the use of room space. This sketch should be kept on regular sized pages, even though more than one page is needed.
- 3 The school colors, mottoes, insignia, and songs.
- 4 A list of names of all student-body officers and a word of welcome from the president.
- 5 Greetings from the principal.
- 6 Greetings from the school secretary, explaining how she and her office can help pupils.
- 7 Greetings from the low-seventh counselor, with a statement of how he will serve low-seventh pupils, where and when he can be seen.
- 8 A list of the low-seventh homeroom teachers, together with their room numbers.
- 9 A description of the location and operation of the attendance office, with emphasis upon regulations affecting pupils.
- 10 A description of the location and operation of the school nurse's office, together with important health and safety regulations.
- 11 A description of the location and operation of the cafeteria and its regulations. It is desirable to include here sample menus and prices.
- 12 A description of the instructional program, together with a statement of required and elective courses for grades 7 to 9.
- 13 A detailed time schedule.
- 14 A description and explanation of the student-body organization, with emphasis upon the student court and the indoor and outdoor traffic organizations.
- 15 A description of the assembly, showing its operation, the nature of its programs, and what is expected of pupils.
- 16 A description of student publications, showing how interested pupils may participate in these activities.
- 17 A description of other extraclass activities, with an explanation of how to join, the cost of participating in various activities, and the time the activities are scheduled.

A sample of the greetings of the principal for the welcome booklet is presented below to illustrate concepts that may be included.

GREETINGS FROM YOUR PRINCIPAL

Hello, Boys and Girls. We welcome you on your first day at Washington Junior High School. You are our new seventh grade, and we want you to feel at home here just as soon as you can. Everything must seem very strange to you. I am sure you will feel more comfortable when you learn more about your school.

You have come to Washington School from several different elementary schools. Most of you have lived in Lincoln all your lives and yet you haven't got acquainted with many other fine boys and girls your own age. You will have a chance to do that here because Washington is a junior high school. It is different from your former schools and different from our senior high school. Here we have a different program which I am sure you will like better, and which will help you grow into better and more capable young men and women. Our program is better for you now because you are older and need different experiences than you had in your elementary school.

Washington is larger than your former schools. At first this may make a good deal of difference to you. Some of you may get lost, some of you may not know how or where to find what you want. Very soon though you will find your way about, for each of you will have a homeroom teacher and a counselor who will help you whenever you need help.

In your elementary school you worked in one room with the same teacher most of the day. Here we work in different groups with different teachers. Then too, instead of working in the same room most of the day you will pass from room to room between periods.

There are so many new things for you to learn about your new school that I am not going to tell you more about them now. Your homeroom teachers plan to spend several weeks helping you learn everything you need to know about Washington School. A committee of pupils has written this booklet to help you understand your school and to help you enjoy and profit from your work here.

At first many of your subjects will seem strange, but on the first day your teachers will explain them to you. In some of them you will continue studying subjects you studied last year. Other subjects will be quite new, but you will find them interesting.

Because you are older now and capable of working harder and of learning more, our state is providing for you a more expensive kind of education than you had last year. You ought to know that our schools here in Lincoln are a part of our state system of education. A good deal of money is needed to operate our schools. Part of the money which pays for Washington School comes from the state, part comes from the county, and part of it comes from Lincoln City School District. All of this money was collected as taxes, some from your parents and some from everyone else in the state. Last year it cost the taxpayers one hundred and thirty-one dollars for each pupil in Washington Junior High School. Suppose for a moment that your parents had to pay one hundred and thirty-one dollars today so that you could come to school this year. In fairness to them, wouldn't you want to work as hard as you possibly could? You and I, and everyone in the Washington School, owe it to your father and mother and to other men and women who are paying for this school, to make Washington

School the best possible school this year I know you are going to help and I am glad to welcome you to our school

One thing more during the days to come I should like to have each of you run into my office to say hello and to visit with me if you have time Remember there are many of you, and only one of me I may not recognize all of you for a few weeks But don't let this bother you, just say hello to me wherever we meet and soon we shall be good friends

Cordially yours,

A M BROWN, PRINCIPAL,
WASHINGTON JUNIOR HIGH SCHOOL
LINCOLN

ASSEMBLIES—Another effective way of aiding incoming pupils in their orientation adjustment is through special assemblies devoted to this purpose This is especially so when older pupils are given the opportunity of participating in assembly programs Committees of eighth- and ninth grade pupils may be trained to observe the difficulties being experienced by incoming low seventh pupils Needs thus observed may be relayed to the pupil assembly program committee, whose function includes that of planning an appropriate assembly These assemblies may include talks by the principal, counselors, teachers, student-body officers, and other pupils By these means, the strong influence of group morale may be focused effectively upon the prevention of maladjustments and upon the early correction of problem behavior

SCHOOL PAPER—Another means of furthering the orientation of low-seventh pupils is through the school paper Many junior high schools publish some kind of school paper, which is widely read by pupils Both the student body and the faculty commonly are given opportunities to contribute to the paper It thus serves both pupils and faculty in the interchange of ideas and becomes an excellent medium through which school procedures, activities, and regulations may be interpreted by older pupils The paper thus assists in building a strong morale, which is essential to the successful operation of any school

PRINCIPAL'S DAILY BULLETIN—Many principals find the regular daily pupil bulletin an indispensable orientation aid during the first few weeks of school The first of these is the *Opening-day Bulletin to Pupils* In this are included complete and explicit explanations of what is expected of pupils on opening day Subsequent bulletins further interpret and clarify prevailing customs, practices,

and regulations as the need for such clarification is discovered through observations of pupil behavior

REGULAR CLASSROOM ORIENTATION—No one procedure alone will prove adequate to orient incoming pupils, nor will any combination of procedures solve all adjustment problems at the beginning of the semester. As maladjustments are observed and as new problems arise, these must be handled in ways that are most appropriate to the problem and to the local school situation. Even though all the above-described procedures are used effectively, much of the real orientation of pupils must be done by teachers as a part of their regular classwork.

In many junior high schools, the homeroom readily lends itself to the orientation of incoming pupils. As previously suggested, the orientation booklet may be used as instructional material in the homeroom during the first few weeks of the semester. Homeroom teachers may encourage pupils to discuss any problems that arise during the process of becoming acquainted with the school. Adjustments may thus be made through personal conferences and through group discussions.

Other Pupils—Slightly different procedures may be used to orient pupils other than regular low-seventh grade pupils. Prominent among other groups of pupils entering junior high school for the first time are (1) those entering the ninth grade from private or parochial eight-year elementary schools or those entering from contiguous eight-year public-elementary-school districts, (2) those transferring from public schools outside the local district, and (3) all those who enter school after the opening of the semester.

Each of these pupil classifications presents special adjustment problems. Many schools inefficiently handle these problems entirely through individual guidance. Some of the orientation problems of these pupils may be handled in groups as well as through individual methods.

One such group procedure is that of revising the orientation booklet and substituting more information about the eighth and ninth grades for certain items that are of specific interest to seventh-grade pupils only. Another "principal's greetings" may be written, omitting specific appeals to low-seventh pupils. All counselors and homeroom teachers need to be listed. Descriptions of extraclass activities should, of course, include those of particular interest to older pupils. Much of the other material in the low-seventh orientation booklet applies to all grades.

In addition to the revised booklet, special assemblies may be arranged for the upper grade pupils who enter at the beginning of the semester. The student body may assist in the orientation of these special groups by providing a "friend" for each new pupil, who assists the newcomer in getting acquainted with the school. It is desirable to assign "friends" from the same homeroom, insofar as possible, with the same daily schedule. Needless to say, homeroom teachers under the chairmanship of the counselor should strongly influence their selection.

Group procedures such as those suggested above will solve many orientation problems common to special pupil groups. To be sure, there will develop many individual problems that may best be handled through individual counseling by regular classroom teachers, by homeroom teachers, and by counselors.

For one reason or another, there is always a considerable number of pupils who enter school at irregular times during the year. Often such pupils are deficient in one or more aspects of their schoolwork. Then, too, during the period of attendance, the school has proceeded with the orientation of regularly enrolled pupils. Classes and extraclass activities have been organized, and the total school program has settled into a smoothly operating routine without them. Other pupils seem to have found a secure place in this orderly scheme of life. Combined, these factors tend to create feelings of uneasiness and insecurity, feelings of not belonging and of being unwanted. Such attitudes are among the basic causes of problem behavior.

The orientation and adjustment of such pupils become a special problem of guidance, calling for the use of those individual and group methods that seem most appropriate to the problems involved. Frequently, irregular pupils may be helped in their adjustments to the social life of the school through conferences with student-body leaders and by selection and assignment of "friends," as previously suggested in the discussion of group orientation.

The Grouping of Pupils—A third step in guidance involves grouping pupils into practical classes or working units. Grouping pupils within each school into grades such as grades 7 to 9 is a traditional procedure that has been practiced in America for about one hundred years. For many years further divisions have been made by midyear promotions. Because of the increased variability of present-day school populations and because of the growing appreciation of the responsibility of schools to meet individual differ-

ences among pupils, traditional grade groupings are proving entirely inadequate

The need for more selective classifications is emphasized by even a casual consideration of the size of pupil enrollments. Although junior high school populations vary greatly in size, median enrollments hover around seven hundred pupils. This means that, on the average, each of grades 7 to 9 will have between two and three hundred pupils. Today no one would suggest attempting to teach in the same class two or three hundred seventh grade pupils or even one hundred or one hundred fifty in each half grade. Obviously, further reduction in the size of classes is needed in most junior high schools. A basic problem confronting administrators is that of choosing classification criteria that will result in the formation of the most effective working groups. Before criteria may be selected intelligently, basic principles governing the grouping of pupils must be accepted.

Principles in the Classification of Pupils—In the grouping of pupils into effective working units, four related principles seem defensible on logical and psychological grounds. These are the principles of reduced heterogeneity, multiple criteria, compromise, and mobility, discussed in the order named.

REDUCED HETEROGENEITY—This principle, applied to the grouping of pupils, states that *other things being equal, the effectiveness of group instruction varies inversely with the heterogeneity of the group*. From this it follows that whatever may be done to reduce the heterogeneity of groups thereby tends to establish classroom conditions that facilitate group instruction. This principle applies the individual principle of learning readiness to group-learning situations.

Grouping pupils into grades such as grades 7 to 9 of junior high school is an illustration of the principle of reduced heterogeneity. Similarly the variability of groups may be reduced through such criteria as chronological age, sex, height, weight, strength, physiological status, subject achievement, and special skills or knowledge, talents and interests.

The principle of the reduced heterogeneity tends to break down when the lessened variability has been effected in areas only slightly related to specific developmental objectives that have been established for the group. Thus the formation of a relatively homogeneous group with respect to musical ability could hardly be expected to create a class composed of pupils ready to learn advanced

algebra or ready for any other learning activity except some related aspect of music.

MULTIPLE CRITERIA.—The second principle states that *the multiple objectives of modern education provide multiple criteria for the classification of pupils*. The application of this principle implies that for greatest effectiveness in learning situations, groups should be relatively homogeneous with respect to the immediate developmental objectives of the class. Thus, when both knowledge and appreciation are held as objectives of a particular class, the heterogeneity of the group should be reduced with respect to both variables. The application of this principle implies further that the present developmental status of pupils with respect to the educational objectives under consideration will determine in large measure the character and tempo of the educational activities provided for them. The nature of individual differences is such that should this principle be carried to its logical conclusion it would culminate in strictly individualized instruction.

COMPROMISE.—The practical conditions under which instruction must be carried on in the public schools are such as to preclude the possibility of thoroughgoing individualized instruction or of realizing any other ideal classification of pupils with respect to all educational objectives for all pupils. The principle of compromise recognizes the practical limitations imposed upon public education and states that, *other factors being equal, the weight assigned to opposing multiple criteria should be proportionate to the long-range personal and social values of the educational objectives being sought*.

The proper weight that should be assigned to each criterion in determining the appropriate classification of pupils is in itself a variable that may be determined only from careful study of the developmental needs of each pupil, as well as of the nature of the group into which it is proposed to place him. It seems obvious, however, that certain educational objectives will assume a position of greater importance when considered in relation to some pupils than these same objectives will for other pupils. No one plan of selecting and weighting criteria has yet been accepted as the best or most satisfactory, and no crucial experimental evidence¹ is available to suggest a final answer to the issue. In the absence of any

¹ COXE, W. W., "Summary and Interpretations," *The National Society for the Study of Education, Thirty-fifth Yearbook*, Part I: "The Grouping of Pupils," Chap. XVI, pp. 305ff., Public School Publishing Company, Bloomington, Ill., 1936.

widespread uniform practice and of crucial experimental data, it would seem premature to recommend at this time a best procedure of objectively weighting important criteria that may be useful in the classification of pupils. However, it may be said that the effective use of weighted multiple criteria must be based upon the best efforts of scientifically trained counselors, teachers, and others to place each child in the most suitable and appropriate group, so that he may work with maximum effectiveness in the everyday practical classroom situations of public education.

Irrespective of theoretical considerations of what pupils ought to do, of what they ought to learn, or of what group they should work with, the crucial test of appropriate grouping is whether the pupil is happily adjusted in the group and is making satisfactory progress in the developmental activities being carried on by the group. This practical test of the effectiveness of tentative classifications must be made in large measure by the homeroom and classroom teachers involved.

MOBILITY—The fourth principle underlying the successful classification of pupils is that of mobility, which states that *when tentative classifications are believed to contribute to individual maladjustment or to unsatisfactory progress toward desirable objectives, pupils should be shifted to another group*. Such causal conditions may arise from serious classification errors, from significant changes of pupil interests, from precocious physical or physiological growth, from personality clashes between teacher and pupil or among pupils themselves, and from various other conditions. This principle does not imply that pupils should be shifted from week to week on the basis of some imagined or fanciful grievance or because of some transitory interest. An essential function of teachers is that of helping children adjust in the group to which they have been assigned, insofar as this may be possible. The principle of mobility does imply, however, that teachers and counselors should seriously consider tensions growing out of inappropriate classifications and that when it becomes apparent that such maladjustments are interfering with wholesome normal growth, the child should be transferred into a more suitable group, regardless of the time of the year.

It should be recognized that the principle of mobility in the classification of pupils places an added burden upon both teachers and administrators, who are thus called upon to make corresponding adjustments in pupil schedules that otherwise might run smoothly throughout the semester. It should be remembered, however,

that both teachers and administrators are employed to serve the interests of pupils rather than for their own convenience, and hence, when schedules fail to serve pupils, schedules should be changed.

Criteria for Grouping Pupils—It has been suggested that the multiple objectives of education provide multiple criteria for the classification of pupils. In Chap I, education was defined as the total procedure of reciprocating responses by which the best possible personality and institutional progress are attained. This definition suggests two broad lines of departure: the development of the whole personality and social progress. The immediate concern of the school is with the development of personality. The total personality, with its many facets, has been variously described. A convenient analysis of the personality may be translated into educational objectives and hence may provide the criteria for pupil classifications.

ASPECTS OF PERSONALITY

- 1 Physical
 - a Morphological: size, form, proportions, appearance
 - b Physiological: organic maturity, pubescence status, health, energy
- 2 Intellectual ability, knowledge
- 3 Emotional maladjustment, maturity, stability
- 4 Social competence, leadership, grace
- 5 Philosophical
 - a Moral, religious, and ethical
 - b Esthetic appreciations and talents
- 6 Integrational balance, proportion

PHYSICAL CRITERIA—In pupil-pupil relationships, as well as in teacher-pupil relationships, physical size, strength, appearance, motor coordination, pubescence status, organic and other physiological functionings exert strong influences. The variability of physical growth patterns for junior-high school pupils was discussed in Chap II, where some of the implications of these differences were emphasized. These implications may be implemented initially through appropriate pupil classifications. Physical factors of various kinds thus assume a place of prominence in any list of criteria for the classification of pupils. These factors include differences in height-weight, physiological maturity, and health, which may be measured by physicians, nurses, or physical-education personnel.

INTELLECTUAL CRITERIA **MENTAL ABILITY—ACHIEVEMENT**—Two important groups of criteria are derived from psychological

aspects of personality These are intellectual criteria and emotional criteria

Intellectual criteria are of two kinds those related to mental ability and those related to knowledge and achievement The significance of differences in mental growth were pointed out in Chap III The quality and quantity of the intellect necessarily retains a place of first importance in any classification of pupils for academic work Of equal importance in this field are the character and amount of knowledge possessed by pupils Taken together, native mental ability plus the knowledge and skills that have been acquired should determine in large measure the nature, the quality, and the tempo of the schoolwork that will be accomplished and therefore the appropriate group classification

Pupil status with respect to mental ability is measured with intelligence tests and is reported in terms of mental age, intelligence quotient, or percentile rank Pupil status with respect to subject achievement, special talents or skills is measured with appropriate standardized tests reported in terms of various norms and derived scores Equally important are teacher measurements and appraisals that are reported in terms of school marks

EMOTIONAL CRITERIA —Emotional life is all pervasive Everything we do or think or feel is tinged with some degree of emotion One of the crucial differences between infants and well adjusted adults is the degree of control that has been developed over the emotions The problems involved in the process of developing adequate and appropriate adjustments under continuously conflicting biosocial influences were discussed in Chap IV Here we need only point out once more the necessary recognition of emotional growth and emotional adjustments as important educational objectives and of the equally necessary concomitant provisions for group development in these areas These provisions may be greatly facilitated through the use of emotional criteria in the grouping of pupils

In the complete cumulative record will be found much data bearing upon emotional growth and development Among these are records of physical health and growth standardized tests of personality interest and adjustment inventories, records of extraclass activities, anecdotal behavior records, rating scales, and other teacher appraisals

SOCIAL CRITERIA —Without doubt, social objectives are being given a place of increasing prominence in modern education. But

they are not yet emphasized to the extent that they deserve in today's rapidly changing complex social order. Educational implications growing out of the social relationships faced by junior-high school children were suggested in Chap. IV. Educational activities that effectively promote social development cannot ignore the present social status and the developmental needs of pupils. The principles of grouping applied in this field suggest the probability of more effective group activity when these are carried on under conditions that reduce the social heterogeneity of pupil groups.

Applications of the principles governing the classification of pupils must employ such criteria as social responsibility, including citizenship and family relationships, and social competence, including manners, etiquette, social usage, social grace, attitudes, and habits of leadership and "followership."

Appraisals of social development may be objectified through the use of a few standardized tests of social intelligence, social competence, and personality, with rating scales filled out by teachers and by other pupils, interest inventories, records of extraclass activities, and with teacher judgments, supported with anecdotal behavior records. The inclusion of such social data has been recommended as an important part of the adequate cumulative-record folder.

PHILOSOPHICAL CRITERIA—Philosophical criteria include moral, ethical, and religious aspects of personality, which may be grouped together under the heading "character." Other philosophical values are more logically described as esthetic appreciations. Both character and esthetic appreciations are included among the objectives of modern education.

Character has been defined as an "enduring psycho-physical disposition to regulate conduct in accordance with a system of values."¹ Any comprehensive consideration of character development must take into account those basic pervasive moral, ethical, and religious values, codes, and principles that actually control personal behavior and social relationships.

The junior high school is responsible for the development of pupils during the critical period of transition into adulthood while many of these psychophysical dispositions are being established. In a similar stage of transition are the highly determinative esthetic

¹ From the unpublished lectures of the late Prof. Charles E. Rugh, University of California, Berkeley, Calif.

standards and appreciations, which include all cultural, social, and artistic attitudes, relationships, and values

Certain educational implications derived from pupil needs in this whole area were suggested in Chap IV. As with other aspects of personality, the realization of related educational objectives may best be accomplished in groups with comparable needs and interests in the various areas of character and esthetic development. Insofar as the realization of philosophical objectives are attempted directly through specific class activities, these should be prominent among the criteria used in the formation of instructional groups.

Various efforts have been made to develop standardized tests of character traits, but as yet none of these has proved highly valid. Subjective estimates of character may be strengthened by systematically recorded behavior data and by the varied uses of rating scales. Greater educational progress may be expected in this field, along with the development of more effective measuring instruments. A few tests of esthetic appreciation are available in the field of music, art, and literature. In many situations, data from these tests will prove useful.

BALANCE AND INTEGRATION AS CRITERIA — For the most part, the best possible personality is one wherein there has been achieved a wholesome, effective development of all the component parts suggested above. Less desirable is the personality that is one-sided or overbalanced in one or another aspect or that has a marked deficiency in some important area. Thus a pupil whose interests and development are centered in large measure only in physical sports, physical comforts, physical appearances or in satisfactions of biological appetites, to the neglect of other important areas of personality, might be considered unevenly developed. The interests and the development of another pupil might center too strongly in intellectual aspects of personality, that is, in acquiring academic knowledge and skills, with a concomitant neglect of the physical, ethical, emotional, or esthetic factors. It should be recognized that the achievement of balance should not be accomplished at the expense of special talents. But there are few pupils in junior high school who are so highly talented artistically or so highly gifted intellectually that they will not profit from an equitable balancing of physical, social, emotional, and ethical factors.

The combination of the component parts of personality in specific individual proportions and balances in their various interrelationships creates a new entity that is something more than the

mere sum of its parts. Two developmental factors must be emphasized. The first of these is the adequate development of the several areas of personality, the physical, intellectual, emotional, social, moral, ethical, religious, and esthetic. The second is that of interrelating the parts into a unified, integrated whole, such that physical factors, for example, will appropriately influence and be influenced by all other factors. To be avoided is the all too common logic-tight compartmentalization of personality. Herein lies the psychological basis for the integrated school programs discussed in Part III.

The implications for pupil classification that may be deduced from an overview of the whole personality are

1 Groupings suggested by the application of a single personality criterion must be reconsidered from the point of view of balance and integration.

2 Groupings suggested by the application of a single personality criterion must be reconsidered from the point of view of the influence of the group into which it is proposed to place an individual pupil. In part, this implication is derived from the principle of compromise and takes into account the fact that the group itself often has greater power to correct aberrations of behavior and to develop desirable behavior patterns than anything the school can do apart from the influence of the group.

It should be emphasized that both these implications serve to modify the extreme application of any criterion apart from interrelationships with other criteria affecting other areas of development.

Factors of balance and integration in personality are not readily measured or described by available appraisal and descriptive techniques. Practical efforts to do this are restricted to the use of data contained in the cumulative folder, but necessarily these are inadequate at present. Available data may be objectified and summarized in an adapted profile graph, which may reveal certain characteristics of balance and proportion but which will suggest nothing with respect to integration, for, indeed, no techniques have been developed either to measure or to describe the integration of personality factors. The criteria and data needed for the classification of pupils according to the various aspects of personality are summarized and presented in Table XV. Here the criteria are restated in terms related to commonly used educational objectives.

The somewhat elaborate and psychologically inclusive framework of principles and criteria suggested here may appear too theoretical for practical use. It should be remembered, however, that these criteria are intended to serve as a guide. Present

TABLE XV—CRITERIA AND DATA NEEDED IN THE CLASSIFICATION OF PUPILS

Criteria	Data
Physical Morphological body height, weight, form, proportions, strength, appearance Physiological organic maturity, pubescence, health, energy	1 Records of growth in height and weight 2 Physical examinations 3 Cumulative health record 4 Pubescence status 5 School attendance records 6 Teacher judgments 7 Physical-education activities
Mental Level of development, rate of growth	1 Intelligence test records, ages, quotients 2 Extraclass-activity records 3 Teacher judgments 4 Record of interests
Achievement Knowledge and skill in subject areas, special abilities and disabilities	1 Achievement-test records, age-grade scores 2 Scholastic honors 3 Cumulative scholastic record, including school marks 4 Results of aptitude tests 5 Records of extraclass activities 6 Teacher judgments
Emotional Maturity, adjustment, stability	1 Results of personality tests, adjustment, interest inventories, health records, rating scales 2 Records of home and community influences and conditions 3 Extraclass activities 4 Teacher judgments 5 Anecdotal records 6 Friendship records, opinions of other pupils
Social Maturity, competence, leadership grace, responsibility	1 Rating scales of cooperation, personal and social relationships and responsibility 2 Records of leadership, friendships, attendance, extraclass activities, participation in community activities 3 Teacher judgments 4 Anecdotal behavior data 5 Records of home and community influences and conditions

TABLE XV—CRITERIA AND DATA NEEDED IN THE CLASSIFICATION OF PUPILS—(Continued)

Criteria	Data
<i>Character</i> Moral standards, ethical values religious beliefs	1 Rating scales of traits 2 Records of attendance, extraclass activities, friendships, participation in community activities 3 Anecdotal behavior data 4 Teacher judgments 5 Records of home and community influences and conditions
<i>Esthetic</i> Appreciations, interests, aptitudes	1 Results of standard tests of appreciation, interest inventories 2 Aptitude tests 3 Extraclass activities 4 Cultural influences of home 5 Teacher judgments
<i>Integration</i> Balance, proportion	1 Entire cumulative record folder 2 Data from conferences interpreting and evaluating the entire contents of the cumulative folder

applications are necessarily limited by our inability to measure adequately. As greater progress is made in the development of better measuring instruments, these criteria are likely to prove more practical.

Administrative Policies of Grouping—After the principles and criteria of grouping have been accepted or agreed upon, there remains the practical problem of establishing working policies of grouping within the limitations of the local school situation.

Prevailing practices in the organization of the seventh grade program of studies tend to make all subjects except extraclass activities required. Some elective courses are offered in the eighth grade, but more are offered in the ninth grade, where often there is an initial differentiation of subjects into curricular divisions, as, for example, into college-preparatory, general, commercial, and vocational curriculums. Differences such as these between the seventh- and the ninth-grade programs warrant the adoption of different practical grouping policies for these grades. In the seventh grade, greater emphasis may be directed toward provisions for individual differences. In the ninth grade, relationships with

the senior high school tend to force a greater emphasis upon curricular groupings and college-preparatory courses, and furthermore, the increased number of electives complicates schedule making and places a practical limitation upon otherwise desirable grouping policies

Various administrative plans are employed by junior high schools to provide for pupil groupings. One of the most commonly used is the homeroom plan. The most important administrative function of the homeroom is that of providing a specific home base for groups of pupils, wherein routine school procedures may be cared for. Since the homeroom is an administrative unit, it is commonly planned to receive pupils who have been grouped together according to the classification criteria employed by the school. Frequently the pupils in the same homeroom have the same individual schedules and move along together in their various subjects.

An example of the homeroom organization is presented in Table XVI, which is based upon an hypothetical average seventh grade of 165 pupils. The plan suggested here is conceptual and is feasible only when the actual conditions approximate the assumed conditions outlined. The suggested groupings are presumed to have grown out of a study of pupil data and needs. It should be noted that five homeroom groups are formed. Three of these, the L 7-1, L 7-2, and L 7-5, are average groups with respect to records of intelligence and achievement. These three groups include approximately two-thirds of the entire low-seventh grade. Differences among these groups are found largely in their social development and emotional maturity. The L 7-1 group has attained an average social and emotional development, the L 7-2 group has attained a superior social development and the L 7-5 group is retarded or immature in these areas. Under these conditions, the instructional programs that are indicated might differ both in content and emphasis. A general all round average program might be suitable for the L 7-1 group. Because of their relative social maturity, the L 7-2 program might stress academic achievement, whereas the L 7-5 program might emphasize stimulating social activities. The culmination of grouping is represented by pupils' individual schedules. Several steps are involved in making pupil schedules. The grade counselor meets with the grade as a group or with individual homeroom groups and presents each pupil with a list of required and elective subjects, including all extraclass

TABLE XVI—A CONCEPTUAL PLAN FOR CLASSIFYING 165 LOW-SEVENTH-GRADE PUPILS INTO HOMEROOM AND INSTRUCTIONAL GROUPS

Low-seventh-grade home-room groups	Approximate size	Characteristics	Instructional purposes
L 7-1	36	Average according to all criteria, mental ability, achievement, social, emotional	To provide an all round average program
L 7-2	36	Average according to mental ability, achievement criteria Superior according to social, emotional criteria	To provide an average academic program, emphasizing subject achievement and the acquisition of basic skills, using socialized procedures
L 7-3	30	General all-round superiority according to all criteria	To provide a fast, enriched program
L 7-4	27	General all round retardation according to all criteria	To provide a slow opportunity program, emphasizing minimum essentials
L 7-5	36	Average according to mental ability, achievement criteria Retarded according to social, emotional criteria	To provide an average program emphasizing social and emotional growth

activities These subject offerings are briefly described, and an explanation of advantages, relationships, and outcomes of each is given. Pupils are advised to discuss the subject offerings with their parents, with whom they are to make out tentative individual *subject lists*. In individual conferences, the counselor reviews individual subject lists in the light of evidence contained in the pupil's cumulative-record folder. In this conference pupils may be given more detailed information or more specific advice with respect to their subject lists. Necessary adjustments that must be made in pupil subject lists should be explained to pupils and, if necessary, to parents.

When all pupil subject lists have been completed, they are turned over to the principal so that he may use them in making the master schedule (Chap XV) After the master schedule is completed, pupils' final individual schedules may be made out When it is impossible or undesirable to schedule a pupil according to his subject list, changes may be made, but again, they should be interpreted to pupils and approved by parents

THE FUNCTIONING GUIDANCE PROGRAM

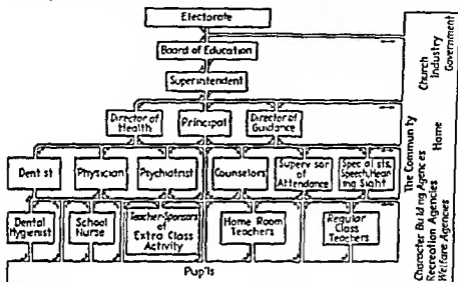
In a well planned school program, the initial steps in guidance facilitate the opening of school with a minimum of friction and ineffectualness These initial steps are basic to the success of the instructional program as well as to the success of the special guidance program However, many of the crucial contributions of guidance are made after the initial steps have been taken An overview of the total guidance program will serve to clarify certain relationships between guidance personnel and will illustrate the ramifications of a well-organized program throughout the school and in the community

Organization of Guidance - A Conceptual Plan—The organization of guidance varies greatly in different school systems No one plan of organization can be best for all school systems For a guidance program to function efficiently, it must conform to the particular needs of the local school situation However, it is important for each school system to develop a definite plan of guidance that should include a list of all necessary personnel, together with a statement of their duties, the established lines of authority, the functional interrelationships between members of the guidance staff, and policies and procedures for coordination with the community

An organization diagram of a practical guidance program is shown in Fig 27 This diagram shows the personnel responsible for guidance and the working relationships existing between them In general, the positions of the rectangles in the chart represent the relative responsibility of the personnel in the administration of the program The rectangle showing the community, with its various parts, extends the full depth of the chart This indicates the varied relationships of the community to the guidance program In some of these relationships the community is on the same level with the electorate, in others it is on the same level with the teachers or with pupils Arrows on the chart suggest a continuous interac-

tion of influences and contacts that emanate both from adults and from pupils

The personnel, as shown in Fig 27, will not be the same in all school systems. Those shown here are suggestive of a feasible organization plan. Many school systems have personnel with different titles performing the same functions as those indicated in this chart, other school systems allocate guidance duties somewhat differently. In such instances interrelationships may vary considerably from those shown here.



3-26

FIG 27—Organization diagram showing the personnel and functional relationships in a guidance program

The electorate chooses a board of education that delegates a major portion of its guidance responsibility to the superintendent. However, the board of education, as well as the electorate, maintains certain direct relationships with various component parts of the community. The superintendent delegates a large portion of his guidance responsibility to the principal, the director of guidance, and the director of health but retains certain direct responsibilities to, and maintains constant relationships with, the community.

The functions of the directors of health and of guidance are largely those of planning and coordinating the guidance program for the entire school system. Specialized guidance services are performed throughout the entire system by the school physician, psychiatrist, dentist, dental hygienist, and specialists in speech, hearing, and sight conservation. Strictly, these specialists do not

conform to the lines of authority indicated in the organization chart. Actually, authority in the guidance program is delegated neither to nor by them. The work of many of these specialists is discussed in connection with the guidance clinic and the coordinating council in later sections of this chapter. The work of specialists in speech, hearing, and sight conservation is to discover defects, to advise teachers, counselors, pupils, and parents, and to conduct remedial and preventive programs.

The direct guidance responsibilities of the principal are limited to problems of one school. He may delegate certain responsibilities to counselors, to the school nurse, or to others, but in the final analysis it is the principal who is responsible for the guidance program in his school. However, the majority of guidance contacts with pupils are made by counselors and other teachers in their varied role as homeroom teachers, sponsors of extraclass activities, and regular classroom teachers.

Principals may delegate much responsibility for guidance to the supervisor of attendance who functions for the entire school system. The particular contributions of the attendance supervisor to the guidance program are treated more fully in a later section of this chapter.

Junior high school guidance programs should be organized so as to take into account the pervasive influence of the entire community in the adjustment of pupils. The specialized guidance services of the school are in fact merely aspects of a larger effort of the community to provide for its children. In the organization chart suggested here, direct relationships and influences are shown between pupils and all personnel below the superintendent. Similar lines of influence are suggested among all personnel of the school and the community. These relationships are pointed out more clearly in a later description of the guidance clinic and the coordinating council.

The Administrative Unit for Guidance—The effective administration of guidance procedures requires some kind of a feasible unit of organization. Various organization plans are used in different schools to provide a convenient workable unit in which all group-guidance procedures may be centered. Two types of guidance units deserve mention. One is the homeroom, the other is the social living class which performs the functions of the homeroom along with other instructional activities. The means of implementing guidance vary but the guidance responsibilities are essentially the same in both places.

The Homeroom—In the discussion of administrative policies of grouping pupils, it was pointed out that the homeroom is commonly used as a unit for administrative details and as a unit in grouping pupils for instructional purposes. When the homeroom is established as an administrative unit, it becomes the logical unit for guidance. The homeroom thus serves as a home base for pupils who are classified in accordance with their educational needs and who therefore have relatively similar individual schedules. This plan facilitates group-guidance procedures that are directed by the counselor and implemented by the homeroom teacher.

In large measure, the success or failure of the entire guidance program varies directly with the interest, enthusiasm, and competence with which homeroom teachers perform their part in the program. Homeroom teachers are regular subject teachers assigned to a specific homeroom group as a part of their total teaching load. Approximately 80 per cent of all the teachers in the junior high school will need to be given homeroom assignments. It is highly essential, therefore, that all teachers be thoroughly conversant with counseling problems and techniques and that they intimately know the pupils assigned to them for guidance.

Homeroom periods are frequently scheduled for only 15 or 20 minutes and homeroom teachers may not have some of their pupils in other classes. Such practices do not allow sufficient contacts between pupils and homeroom teachers to enable them to accomplish the guidance responsibilities of the homeroom. Too commonly homeroom teachers actually know their homeroom pupils less intimately than they know other pupils whom they teach. This weakness can be overcome in large measure if homeroom teachers also have their pupils in a subject class.

The Social Living Class—Under the social living plan all social living classes serve as the homeroom for one group of pupils and all homeroom functions are performed by social living teachers. Frequently social living classes are organized on a double-period basis. Thus all social living teachers must have two or three double social living classes.

One of the essential differences between the homeroom unit and the social living class lies in the means used to achieve the same purposes. In the homeroom the counseling approach is direct in the social living class it is indirect. Whereas the emphasis of the social living class may be centered upon personal social problems of pupils the subject content frequently is some combination of English and social studies.

In theory, at least, the social-living class offers many advantages over the older homeroom plan, although in practice these possibilities have not always been realized. Some of the advantages of the social-living class as the unit for guidance are:

- 1 The double period offers a wider range of instructional opportunities to develop an adequate informational background, which is needed for guidance
- 2 The double period offers a better opportunity to study pupils
- 3 The indirect approach to guidance is advantageous, since it centers attention on an organized unit of study and at the same time emphasizes personal applications
- 4 The social living plan has greater possibilities for specialization and hence for efficiency, since the entire teaching load of one teacher usually is taken up with social living classes
- 5 Social living teachers may be more highly selected for the specific work involved

Plans of Assigning Counselors—There are two commonly used plans of assigning counselors in the junior high school. One is the grade plan, the other is the continuous plan. Under the grade plan one counselor is assigned to each of the three grades. Thus the seventh-grade counselor receives the pupils from the sixth grade of the elementary schools, directs their orientation to the junior high school, and counsels them through the seventh grade. The eighth-grade counselor assumes the guidance responsibility for all eighth-grade pupils, which includes scheduling their low-ninth activities. The third counselor then receives them, counsels them through the ninth grade, and helps orient them to the senior high school. This plan has the advantage of permitting each counselor to specialize in techniques of counseling in a particular grade. Thus only the seventh-grade counselor needs to establish extensive relationships with the elementary school, and only the ninth grade counselor needs to assume responsibility for orientation relationships with the senior high school. Each counselor is expected to become thoroughly conversant with the special problems of a particular grade and is presumed to need only slight familiarity with adjustment problems of the other grades. The grade plan has the disadvantage of changing counselors just when they are beginning to know pupils well enough to do effective counseling.

Under the continuous plan of counseling, a counselor is assigned to each new seventh grade group. This counselor continues with the same class during its three years in the junior high school, performing all counseling functions for the class, orienting them in the seventh grade as well as to the tenth grade of the senior high

school Under this plan the counselor has an opportunity to make a more extended study of his particular pupils The emphasis is shifted from the study of the techniques of counseling in each grade to a more intensive continuous study of the pupils themselves, which enables the counselor to build effective, confidential, working relationships with pupils

Orientation techniques required in the seventh and ninth grades, problems of scheduling pupils, and other techniques of counseling in the three grades of the junior high school do not justify a specialization of counselors in each grade An understanding of all these techniques is necessary for all counselors, even though the counseling is done in only one grade An eighth-grade counselor will do more effective work if he understands the problems of the seventh and ninth grade and has made extensive contacts with both the elementary school and with the senior high school Furthermore, the evidence concerning physical, mental, and social growth presented in Part I, emphasizes the fact that the variability of pupils in each grade is greater than the differences among pupils of grades 7 to 9 as groups, and hence personal social adjustment problems of pupils in different grades must overlap in proportion to the differences

Another distinctive advantage of the continuous plan of counseling is that of promoting more stable and more intimate contacts and relationships with the home When desirable relationships have been developed by a counselor, he is then in a position to secure maximum cooperation of the parents in the solution of pupil problems Breaking these relationships by assigning the pupils to another counselor each year disrupts the counseling program for as long a period as is required by the new counselor to reestablish similar effective relationships The social and personal problems that confront boys and girls in our present complex society frequently are of such a nature as to require information that is highly confidential and intimate before the schools can work effectively toward permanent adjustments It is but natural for some parents who are unappreciative of the causes of behavior problems to resent the "meddling interference" of school people in their private lives After a counselor has broken down this resistance and gained their confidence, they welcome his help and advice and want to continue school relationships with their "friend" More than ever they resent efforts of a "stranger" to come into the home These attitudes make it doubly difficult for a new counselor to gain the friend

ship and cooperation of parents From many points of view the plan of continuous counseling seems preferable to the plan of assigning new counselors each year

Further Functions of Counseling—Certain responsibilities assigned to counselors have been pointed out in the discussion of initial steps in guidance During the school year counselors must engage in many types of activities and must attack many types of problems in their continuous contacts with pupils, teachers, and parents One of the *continuous duties of counselors* is that of watching the progress of each pupil in all his classroom activities When progress is unsatisfactory or when there are symptoms of emotional strain and maladjustment, it is the counselors' responsibility to discover the causes and to use every means possible to remove them so that every pupil may progress toward the objectives set for him To be sure, teachers share in this responsibility Regular classroom teachers, as well as homeroom teachers, should be alert at all times to detect signs of ill health or evidences of incipient problem behavior and maladjustment

The scope and the variety of problem areas and conditions wherein counselors are at least partially responsible for pupil adjustments are well illustrated by the following list, which is adapted from a more complete list presented by Jones

PROBLEM AREAS AND CONDITIONS

1 Health and physical development

Conditions

- a Physical defects—sight, hearing, speech, deformity
- b Inability to excel in athletics
- c Lack of physical coordination
- d Lack of physical vigor
- e Malnutrition
- f Physical unattractiveness
- g Sickness
- h Undersize or oversize

2 Home and family relationships

Conditions

- a Dominance of parents
- b Lack of control by parents
- c Lack of home fellowship
- d Broken homes—death, divorce, separation
- e Home duties—too few or too many
- f Jealousy or friction among children

- g* Non-wholesome home conditions—physical, social, moral
- h* Disapproving family
- i* Lack of cooperation with school

3 Leisure time

Conditions

- a* Lack of interest in sports and games
- b* Inability because of poor health or physical handicaps to engage in sports
- c* Limited resources for enjoyment
- d* Lack of interest in reading
- e* Lack of skill in handicraft

4 Personality

Conditions

- a* Extreme sensitiveness
- b* Shyness
- c* Lack of aggressiveness
- d* Strong aversions
- e* Self confidence or its lack
- f* Excessive conceit, egotism
- g* Carelessness
- h* Inability to get along with people
- i* Delusions
- j* Lack of sportsmanship
- k* Inferiority complex
- l* Superiority complex
- m* Lack of social mindedness
- n* Emotional instability

5 Religious life and church affiliations

Conditions

- a* Religious doubts and conflicts
- b* Extreme religious attitude of parents
- c* Conversion
- d* Excessive religious activity
- e* Apparent conflict between science and religion

6 School

Conditions

- a* Budgeting time
- b* Ineffective study habits
- c* Lack of application
- d* Lack of independence
- e* Too much help given by teacher
- f* Lack of interest in school work
- g* Feeling of boredom
- h* Inability to see value in certain subjects
- i* Fear of failure

ship between problem behavior in general and irregular attendance at school, the closest cooperation should exist between the supervisor of attendance and the counselor. Not infrequently the supervisor of attendance is able to do more effective guidance work with difficult cases than can be done by the counselor.

Several factors contribute to the influence of the attendance officer. In the first place, he is a man capable of meeting and mastering unusual discipline problems. In the second place, he is a special police officer, with power to enforce the law. Being scientifically trained in personnel and guidance work, he uses his police power only with extreme cases and then only after conferences with the principal.

Although the responsibility for initiating, directing, and coordinating all guidance procedures rests with the counselor, he cannot neglect the contributions that may be made by the attendance supervisor.

Articulation—A close counseling relationship must be maintained with the senior high school. The problem here is that of achieving a smooth, planned transition from the junior to the senior high school. Achieving such a transition involves a series of steps not unlike those suggested for the orientation of pupils to the junior high school. But it involves one further step, that of anticipating the educational requirements of the senior high school.

The present high ninth grade counselor and the next semester's low tenth grade counselor need to work in close cooperation with each other throughout the semester. All pupil data accumulated during the junior high school should be reviewed by them. Each should become thoroughly familiar with the problems facing the other. This may be facilitated by exchange visits and conferences. Both counselors may meet with the high ninth pupils as a group, present each pupil with a suitable orientation bulletin, and explain in some detail the standards, requirements, program, and procedures of the senior high school. Here, too, a list of subjects and extra-class activities is presented and discussed. After pupils have discussed low tenth-grade subjects with their parents, both counselors may assist them in making out their individual subject lists for the next semester.

Special orientation activities may be planned, such as a junior-high-school assembly to introduce the principal of the senior high school and to hear talks by senior high-school pupils. This may be followed by a visit of the high ninth class to the senior high school.



Ability and other tests help us discover their abilities (Photograph courtesy of public schools San Jose Calif)



Eternal vigilance is the price of good health (Photograph courtesy of public schools San Jose Calif) (Facing page 170)

Probably as important as any of these procedures in achieving a smooth transition to the senior high school are the private counselor-pupil conferences held throughout the three years of the junior high school, in which various aspects of senior-high-school work are related to the present activities of the pupils. Of untold value is the cumulative effect of planned conferences, which, in a seemingly incidental manner, anticipate what lies ahead. Information secured from such conferences is useful in planning the instructional program during the junior-high-school course, in securing the cooperative counseling support of homeroom and subject teachers, and in securing the cooperation of parents.

THE GUIDANCE CLINIC

Frequently the causes of behavior problems in junior high school are to be found in conditions and relationships outside of the school. In such cases remedial procedures must include these out-of-school factors. Often counselors need the assistance of a number of specialists and a number of community agencies to discover the real causes of behavioral disturbances, and more often they require the cooperation of such persons to envision and to effect correctional measures.

A fairly recent development in the field of guidance is the organization of the guidance clinic to facilitate the adjustment of pupils. The guidance clinic is an organization working out of the central office, usually under the leadership of the director of guidance. It is concerned with special adjustment problems originating anywhere in the school system. In addition to the director of guidance, the basic personnel of the clinic includes the school physician and the school psychiatrist. When adjustment cases are brought before the clinic, the director of guidance includes as members certain personnel from the school in which the pupil is enrolled. Usually these include the principal, the counselor, the homeroom teacher, and the school nurse. The nature of the particular problem under consideration determines the number and type of additional specialists who are invited to assist the clinic. At various times there may be brought in such persons as the dentist, eye, speech, or hearing specialists, representatives of church, welfare, recreational, or other character-building agencies. Frequently represented also are the juvenile court and the police department. One or both of the parents of the pupil are always called into some of the conferences.

When the adjustment problems of a pupil do not yield to the efforts of the local junior high school personnel, the case may be referred to the guidance clinic. The counselor then secures the approval of the parents for a clinical study of the case as well as assurance of their full cooperation with the clinic. He then prepares a thorough case history, incorporating all available evidence. This case history is added to the cumulative record of the pupil, which is forwarded to the director of guidance, who makes it available to the physician and other specialists participating in the study. In the first conference, the physician, assisted by the school nurse, examines the pupil in the presence of the parents. The findings and recommendations of the physician are added to the cumulative record of the pupil. The pupil's completed cumulative-record folder is then presented to the psychiatrist, who reviews it with the junior-high-school principal, the counselor, and the homeroom teacher involved. The psychiatrist then holds a private conference with the parents, after which he confers with the pupil. After the pupil has been excused, the psychiatrist reviews with the parents his findings and recommendations for adjustment. Following this conference with the parents, the psychiatrist again reviews the case with the principal and all members of his staff who may be involved. During this conference tentative recommendations and procedures are agreed upon. Frequently parents are called in near the close of this conference, so as to obtain complete cooperation and coordination.

The initial efforts of the guidance clinic are always directed toward uncovering the basic causes of behavioral maladjustments and difficulties. Frequently behavior symptoms, that is, the actual overt behavior of pupils, seem quite unrelated to the basic causes. Effective remedial or preventive measures must be based upon a knowledge of the real causes and not upon the outward symptoms. The discovery of causes is often quite involved, but usually this is much simpler than effectively removing the cause and achieving a satisfactory adjustment of the case. The general sources of personal and social conflicts and maladjustments were presented throughout Part I. Illuminating examples of the influence of complexes of conflicting biological and social forces have been described in a number of recent volumes.¹ If the work of the

¹ BRILL, J. G., and PARVE, E. G., *The Adolescent Court and Crime Prevention*, 230 pp., Pitman Publishing Corporation New York, 1938. CHAYE ERNEST J., *Personality Development in Children*, 354 pp., University of Chicago



Psychiatrist conferring with pupil (Photograph courtesy of public schools Berkeley Calif)



Guidance clinic discussing pupil Psychiatrist principal counselor parent and teachers (Photograph courtesy of public schools Berkeley Calif)



Berkeley coordinating council (Photograph courtesy of public schools Berkeley Calif)

guidance clinic is to be made effective, there must be a long-time systematic follow-up of the case. This involves the combined and coordinated efforts of the parents, the school, and the entire community.

THE COORDINATING COUNCIL

The guidance clinic is a highly professional organization of specialists associated with the school. The remedial and preventive recommendations proposed by the clinic most commonly involve some aspects of community life. There are always a number of individuals and agencies in each community that are concerned with the welfare of youths and with community influences affecting them. Often such individuals and agencies are unaware of specific problems and their attendant causal conditions and hence are unable to work toward their correction. All character-building and welfare agencies are in contact with a few problems, but their remedial efforts are often nullified because of lack of cooperation with other community agencies. There is a recognized need for a coordinating agency to bring together all forces within the community that are working for the betterment of social conditions in general and particularly for the welfare of youths.

There has thus arisen a new community organization which is called "the coordinating council." The first of these organizations was formed in Berkeley, Calif., in 1919, under the leadership of Virgil E. Dickson. Since 1930 the coordinating council movement has spread rapidly. According to Fenton,¹ there are now over four hundred such councils in more than twenty states.

Usually the coordinating council is a voluntary organization comprised of the heads of public and private community agencies interested in child welfare. Often included are the city mayor or city manager, the superintendent of schools, chief of police, public health officer, superintendent of recreation, chief of welfare and charities, chief of the juvenile probation department, and the judge of the justice court. Often wider cross sections of community

Press Chicago 1937. DOLLARD JOHN and others *Frustration and Aggression* 209 pp., The Institute of Human Relations, Yale University Press New Haven 1939. KELLNER ALICE V., *Life and Growth*, 245 pp., Commission on Human Relations D. Appleton Century Company, Inc., New York, 1938. ZACHRY, CAROLINE B., *Emotion and Conduct in Adolescence*, 563 pp., D. Appleton Century Company, Inc. New York 1940.

¹ FENTON, NORMAN "The Coordinating Council offers a Solution" *California Journal of Secondary Education*, Vol 15, No 1, pp 32-38 January, 1940

interests are included, such as the Congress of Parents and Teachers, service clubs, churches, women's clubs, and all character-building agencies

Members of the council present specific problems that require the coordinated efforts of the entire community. Discussions center on the contributions that each agency can make toward the solution of the problem. The council does not set up rules and regulations nor does it give instructions to any agency. Through discussions it clarifies problems and often works out proposals for remedial action. Specific delinquency areas may be studied and plans worked out so as to effect the coordinated efforts of all agencies to remove the causes, whatever they may be.

SUMMARY

The need for guidance in modern schools arises from changed social conditions with their attendant new educational problems, and from the public demand for a wider democratization of school services. Guidance may be defined as the coordinated effort of the school and community to build wholesome, adjusted personalities in children and to prepare them for entering adult life with optimal prospects for success and happiness.

Certain preliminary or initial steps in guidance must be taken before the regular school program gets under way. These are (1) collecting data on pupils, that are recorded in usable cumulative-record folders, (2) orienting new pupils to the junior high school, and (3) grouping pupils.

Grouping pupils is essential both to the regular instructional program and to the guidance program. Because of the importance of pupil classifications, it is desirable to have grouping procedures upon sound principles, effective criteria, and practical administrative policies. Four principles are found to underlie the classification of pupils: (1) reduced heterogeneity, (2) multiple criteria, (3) compromise, and (4) mobility. Criteria for the classification of pupils are found in aspects of personality and are coordinate with the objectives of education. A defensible set of criteria for grouping pupils includes developmental objectives relevant to (1) physical, (2) mental, (3) achievement, (4) emotional, (5) social, (6) character, (7) esthetic, and (8) integrational characteristics of pupils.

Planned guidance adapted to local needs and conditions is necessary for greatest effectiveness. Plans should coordinate com-

munity agencies with efforts of the school in the development of children. The homeroom is a convenient administrative unit of the junior high school and logically may serve as the unit for guidance. Homerooms may be scheduled separately or as a part of the newer social living classes. The latter plan seems preferable. The plan of assigning counselors so that they may follow one grade group through the three years of the junior high school seems more defensible than other plans.

The causes of behavior problems and of maladjustments are found in the school and in various aspects of the entire community. The discovery of these causes often requires the help of many persons. The removal of causes or the establishment of wholesome adjustments to them often requires the continuous coordination of the efforts of many persons and agencies in the community and in the school. The discovery of the causes of unsocial behavior and the adjustment of pupils are among the principal duties of counselors, and hence maintaining close harmonious working relationships with every one who may be in a position to contribute to this guidance program is essential to effective counseling.

The guidance clinic is an agency of the central office that is intended to facilitate the adjustment of unusually difficult problems by focusing the attention of several specialists upon one pupil and evolving a cooperative adjustment program for him.

There is a recognized need of bringing together within the community all agencies that are working for the betterment of social conditions. The coordinating council has been organized to accomplish this purpose. Through this council many communities are attempting to coordinate all local efforts to build a better environment for youths.

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CHAPTER VI

THE ADJUSTMENT OF EXCEPTIONAL CHILDREN

The basic principles and procedures for the guidance of junior-high-school pupils were presented in the preceding chapter. These are the normative procedures that serve effectively in the adjustment of relatively normal or average children. Because of the variability of individual differences among pupils, consideration must be given to the more extreme deviates in the major areas of human development in order to discover the extent of the deviations and to provide special remedial and adjustmental programs for pupils as indicated by their needs.

DEFINITION AND INCIDENCE OF EXCEPTIONAL CHILDREN

Three broadly classified overlapping groups of children deviate so far from normal that they cannot adjust to or reasonably profit from the regular school programs. These are the exceptional children who require special educational treatment to enable them to make more adequate adjustments and developments. The broad groups into which these pupils commonly are classified are the physically handicapped, the mentally abnormal, and the socially maladjusted.

No rigorous definitions of types of exceptional children have been made, and hence no exact limitations separate them from normal children. The problem of identifying physically handicapped, mentally abnormal, or socially maladjusted children is one that is affected by the philosophy of the local school, the adequacy of special provisions within the school to provide differentiated instruction to meet individual differences, the professional qualifications of the teaching staff to conduct special classes, the room space and the school equipment, the total teaching load that teachers must carry, and community provisions to care for children excluded from school.

A comprehensive survey and census of exceptional children in the United States was made by the White House Conference

Committee on Special Education¹ The committee estimated that there were 13,521,100 handicapped children of all types. This is approximately one-half of the total public-school population in the United States today. The magnitude of the special educational problems presented by these data is staggering. The implications are strong for *modified* school programs to care for these exceptional children.

TABLE XVII—HANDICAPPED CHILDREN IN THE UNITED STATES*

Type of Handicap	Number
Blindness (children under 20)	14 400
Partial sight	50 000
Impaired hearing	3 000 000
Defective speech (5-18)	1 000 000
Crippled condition (calling for special education)	100 000
Tubercular condition	382 000
Suspected tuberculosis	850 000
Weak or damaged heart	1 000 000
Malnourished state (school age)	6 000 000
Behavior problems (3 per cent of elementary)	675 000
Mentally retarded condition	450 000

* Adapted from WHITE HOUSE CONFERENCE, *Special Education: The Handicapped and the Gifted* pp 5-6. D. Appleton-Century Company Inc., New York 1931.

The distribution of the numbers of school children by types of handicaps is shown in Table XVII. For convenience, exceptional children are described in this chapter under physical, mental, and social classifications as though these were mutually exclusive groupings. It must not be supposed that this is the case, however, for it is usual to find more than one exceptional characteristic in the same child. Pupils who are crippled or who have defective vision or hearing may likewise have some degree of social maladjustment. In like manner, pupils who are malnourished may also be suffering from a cardiac or pulmonary impairment or from various other physical defects. The general findings of experimental studies reveal low but positive correlations between *desirable traits and abilities*. This means that, on the average, there will tend to be associated together in the same individuals high intelligence, good physique and health, adequate sensory capacities, and satisfactory social adjustment, and that there will tend to be associated together in other individuals low intelligence, poor physique and health, sensory defects and incapacities, and social maladjustment. This

¹ WHITE HOUSE CONFERENCE, *Special Education: The Handicapped and the Gifted* pp 5-6. D. Appleton-Century Company Inc., New York 1931.

general relationship serves to complicate the educational problems of exceptional children and throws an added burden of individualization upon the school program.

The objectives of junior-high-school education recognize the need for providing suitable educational environments for all the children of all the people. The junior high school itself is maintained to solve unique educational problems of an age group. The fact that there are special problems within that age group that may not be handled with normative procedures means that junior high schools should use every means possible to provide special education insofar as these added services contribute to the welfare of exceptional children and insofar as special classes are not inimical to the welfare of other pupils.

PROVISIONS FOR THE ADJUSTMENT OF SPECIAL TYPES OF EXCEPTIONAL CHILDREN

Standards for the classification of exceptional children and standards for providing special education for them are still in a preliminary stage of development. These standards vary from state to state, from city to city, and even from school to school. Lack of uniform standards is partially revealed by variations in state and local public-school provisions that are being made for exceptional children throughout the nation. These provisions are presented in Table XVIII. Provisions for exceptional children in special classrooms, as indicated in Table XVIII, should be

TABLE XVIII—THE CLASSROOM ENROLLMENT OF EXCEPTIONAL CHILDREN IN PUBLIC DAY SCHOOLS IN THE UNITED STATES, 1935-1936*

Type of Children	Enrollment
Blind and partially seeing	7,218
Deaf and hard of hearing	9,282
Mentally deficient	99,515
Socially maladjusted (truant, incorrigible, delinquent)	12,640
Delicate	21,402
Crippled	12,533
Speech defective	116,750
Mentally gifted	3,007
Not segregated as to type	303
Total	282,710

* Adapted from *Biennial Survey of Education 1934-1936* Vol. II, *Statistics of Special Schools and Classes for Exceptional Children*, Chap. VI, p. 8, Table 3-A, Bulletin 2 U. S. Office of Education, 1937.

compared with the total number of children of each type, as indicated in Table XVII. The neglect of many thousands of excep-

tional children becomes apparent from such a comparison and serves to emphasize the fact that the problem of the special education of exceptional children is only beginning to be appreciated as a responsibility of every community. Enrollment trends in special classes are increasing throughout the nation year by year. The history of enrollment trends in special classes, as revealed in the *Biennial Survey of Education*, points clearly to the fact that "special education of exceptional children is becoming an indispensable feature of the educational program designed to serve the needs of all the children."¹

The Adjustment of Physically Handicapped Children.—Five types of physically handicapped children were recognized by the White House Conference. These were (1) the crippled, (2) the deaf and hard of hearing, (3) the blind and partially seeing, (4) the speech defective, and (5) all children of lowered vitality, including such cases as those of malnourishment, anemia, pre-tuberculosis, or cardiac difficulties. Together these physically handicapped children constitute approximately 90 per cent of all exceptional children. The numbers of exceptional children of each type were shown in Table XVII. In Table XIX the num-

TABLE XIX.—THE NUMBER OF PHYSICALLY HANDICAPPED CHILDREN IN THE UNITED STATES AND THE ESTIMATED NUMBER PER 1,000 POPULATION

Type of handicap	Total number in United States*	Estimated number per 1,000 pupils ^b
Blindness (children under 20).....	14,400	0.5
Partial sight.....	50,000	1.7
Impaired hearing.....	3,000,000	100.0
Defective speech (5-18).....	1,000,000	33.3
Crippled condition (calling for special education).....	100,000	3.3
Suspected tuberculosis.....	850,000	28.3
Weak or damaged heart.....	1,000,000	33.3
Malnourished (school age).....	6,000,000	200.0

* Data repeated from Table XVII.

^b Estimated numbers based upon data of column 1 and upon percentages computed on the basis of a total public-school population of thirty million.

bers of physically handicapped children are repeated and shown with the estimated number of each type that would normally

¹ BIENNIAL SURVEY OF EDUCATION 1934-1936, Vol. II, *Statistics of Special Schools and Classes for Exceptional Children*, Chap. VI, p. 9, Bulletin 2, U. S. Office of Education, 1937.

be expected in a junior high school with a pupil population of 1,000. These estimates are based upon the data of Table XVII and upon correlary percentages computed on the basis of a total pupil population of thirty million. In these estimates the assumption is made that there is no duplication of defects among children. The table might be read more accurately by interpreting column 2 as the number of defects rather than as the number of children. Since there are no data on the number of duplications, adjustments may be made within each school after careful examinations of pupils enrolled. With wide variations in national and local standards for the classifications of exceptional children, we can expect little agreement at present upon the numbers of children who should be placed in physically handicapped groups. In junior high schools there are no criteria that are uniformly used to determine degrees of malnourishment, cardiac or pulmonary disturbances, or, for that matter, degrees of defective vision, hearing and speech disorders or of the degree of handicap accompanying various crippling physical conditions. Decisions must be rendered with reference to each individual pupil after adequate measurements have been made by competent persons. When the degree of sensory capacity, physical energy, or mobility is insufficient to enable a pupil to meet the ordinary requirements of school life, the child should be classed as exceptional and should be provided with special education in the regular school or be placed in a special day or special residential school, to provide the care and treatment indicated by the condition involved.

The adjustment of physically handicapped children as a group involves (1) identification, (2) referral, (3) correctional procedures where indicated, (4) special educational programs as indicated by the condition, and (5) the development of positive mental health. Each type of physical handicap presents educational problems that demand specialized treatment.

The Blind and Partially Seeing—In a junior high school with the pupil population of 1,000, there would normally be found not more than 2 or 3 pupils who would have eye defects serious enough to need special sight-saving classes. Blind children are defined as those having no vision or vision below 20/200. This means a degree of defect that makes a pupil unable to see at a distance greater than 20 feet what the normal child is able to see at 200 feet. Pupils classified as partially seeing are those who have (1) vision between 20/200 and 20/70 in the better eye after correction, (2)

progressive myopia, although glasses may make the vision nearly normal, and (3) diseases of the eye that cause irritation. Any other child who, in the opinion of an oculist, would benefit by special sight-saving methods¹ should also be classed as partially seeing.

All teachers share the social responsibility of developing children so that they will have as nearly normal vision as possible. Although school health and medical examinations are commonly given for the purpose of detecting visual defects, as well as other sensory and physical conditions, these cannot be depended upon to discover all visual handicaps. Many teachers do not realize that children who cannot see normally are often themselves unaware of this disability. It therefore becomes imperative for teachers to be constantly alert to detect symptoms of visual defect and to refer pupils needing care to the proper medical authority. Some of the more common symptoms that teachers should notice are inability to see, frequent mistakes with figures and words, discomfort in reading, headaches, peculiar head positions, holding books close to eyes, squinting, blinking, watering or inflammation of the eyes, or any other deviation from normal. Further responsibilities of teachers include provisions for the prevention of visual disabilities. Among other things, this involves adequate lighting, both natural and artificial. Illumination standards for various types of schoolwork are highly conflicting. Only in recent years have the standards received serious consideration. At the present time an illumination of 15 foot-candles is a reasonable minimum for ordinary reading with normal eyes. For exacting work, such as sewing or drafting, at least 25 foot-candles are needed for normal eyes. Children with serious visual defects should not be scheduled for these latter activities. Favorable lighting conditions are discussed in more detail in Chap. XVII. It must be recognized that pupils with impaired vision need considerably more light than do normal children.

Many of the methods successfully used in special sight-saving classes might well be adopted in slightly modified form in regular classrooms in order to preserve the relatively normal vision of many pupils. Books with larger print, heavier pencils for coarser writing, unglazed paper, adjustable desks at the proper height and angle, and adequate light with no glare are some of the factors that con-

¹ McLEOD BEATRICE *Teachers Problems with Exceptional Children I Blind and Partially Seeing Children* Pamphlet 40 p. 9 U. S. Office of Education 1933

tribute to the sight conservation of slightly defective vision, as well as to the vision of the partially seeing

Habits and attitudes toward sight conservation that are established in the school should be carried into the home. This is especially important with serious visual defects. Many parents do not appreciate the need for proper lighting and, being ambitious for their children, encourage them to read extensively at night, often under damaging lighting conditions. Few such parents would tolerate these conditions if they realized the harm being done to their children. Appropriate habits and understandings may be established in the classroom, and much can be done to carry these into the home.

The Deaf and Hard of Hearing—In a junior high school with a population of 1,000 pupils, there will normally be found 100 pupils with impaired hearing. According to the standards established by the White House Conference,¹ the difference between the deaf and the hard of hearing is not so much the degree of deafness as it is the ability to understand and use oral language. Truly deaf children have been prevented from establishing speech and oral language habits. The hard of hearing have established these habits before losing their auditory sensitivity. The educational problems presented are thus vastly different.

Excellent hearing tests are available. Different types of audiometers may be used instead of the older and less accurate watch and whisper methods. But despite the availability and use of effective hearing tests some pupils with defective hearing are likely to go undetected. Testing errors can be made, and relatively serious defects may arise at any time from accidents or from diseases such as the common communicable diseases, colds, and sinus infections. It is particularly important, therefore, for teachers to be alert to detect symptoms of defective hearing. Serious hearing defects in children are relatively easy to discover, and these are really the exception. However, since no standard has been established below which children could not be expected to profit from regular class activities, children with marked hearing difficulties are likely to be found in regular classes. Sometimes teachers are unfamiliar with the findings of health examinations in which defective hearing has been discovered. Familiarity with

¹ WHITE HOUSE CONFERENCE ON CHILD HEALTH AND PROTECTION *Special Education. The Handicapped and the Gifted* pp 277-322, D Appleton Century Company, Inc., New York, 1931

these records is, of course, a first responsibility for all teachers and counselors. Further than this, teachers should watch for symptoms that are common among children whose hearing is impaired. Such symptoms include a stupid, dull appearance, defective speech, inattention to classroom activities, failure in schoolwork, together with a complex of personality maladjustments that may briefly be characterized as withdrawal tendencies. The hard-of-hearing child is commonly mistaken for a stupid child.

The educational program for hard-of-hearing children should make special provision for speech reading and other aspects of speech education. Otherwise these pupils should engage in the same type of educational activities that they would be following if they had normal hearing. There is no type of exceptional child who appears more morose and depressed than the deaf and hard of hearing. It is highly desirable that a continuous effort be made to provide success experiences and at least one activity wherein the hard-of-hearing child can excel.

The character of the educational program that is planned for hard-of-hearing children should be determined in large measure by the severity of the defect. Children with complete total deafness obviously should be provided with training in the junior high school that has some degree of vocational specialization.

Defective Speech—Children with defective speech are handicapped in proportion to the seriousness of the defect. The term "defective speech" is restricted to lisping, stuttering and to various organic articulations that are sufficiently severe to require medical attention or remedial training. This is a highly relative definition, which greatly influences the census enumeration of such children. The White House Conference found one million such children. The normal expectancy of such children for a junior high school of 1 000 pupils is shown in Table XIX to be 33.

The causes of defective speech are both physical and emotional. Certain organic conditions that seriously impair or prevent normal speech include harelip, cleft palate, extremely malformed teeth and palate, paralysis affecting the throat muscles, disturbances in the central nervous system causing aphasia and aphonia. Stuttering is commonly regarded as of functional or emotional origin and is by far the most prevalent of the major speech disorders.

School specialists dealing with the correction of speech disorders have had considerable success with minor defects such as the elimination of foreign accents, the correction of lalling or baby talk,

and lisping But relatively few serious cases of stuttering yield to remedial exercises and other provisions that are made for their correction in the schools Indeed, correctional efforts have proved so futile that speech specialists themselves are in considerable disagreement with respect to the most effective procedures for correcting stuttering, and hence no one best method can be recommended at present¹ All specialists, however, are agreed upon the importance of good personal health and hygiene, the removal or correction of contributing organic conditions, and the need for some kind of specific remedial program With emotional conflicts and social maladjustments generally agreed upon as the inciting cause of a great majority of cases of stuttering, there is thus indicated a need for thorough clinical analyses by the child-guidance clinic before specific remedial measures are attempted

Teachers who conduct special classes for defective speech should have extensive specialized training in this field, and they should be thoroughly sympathetic with the child in the disturbing experiences he has with his handicap There are several things that regular classroom teachers can do to assist in the correction of speech defects they can detect and refer defects to supervising specialists, they can assist in carrying out remedial programs that have been agreed upon, and they can enlist the intelligent and sympathetic understanding of other pupils and of parents in the remedial program provided for stuttering pupils so as to prevent further emotional tensions and embarrassment on the part of the child.

Crippled Children—The identification of seriously crippled children in school is relatively easy Usually various agencies within the community cooperate with the school to locate crippled children out of school The White House Conference subcommittee on crippled children reported 300,000 crippled children in the United States, but only 100,000 of these were found to need special education These were defined as follows

A crippled child eligible to attend a special school or class for crippled children is one who, by reason of disease, accident, or congenital deformity, cannot attend the regular school with safety and profit during the period of his physical rehabilitation, simultaneous mental training and social adjustment

¹ WEDBERG, CONRAD F., *The Historical Development of Casual Theories and Remedial Procedures in Stuttering*, unpublished M. A. thesis, University of Redlands, Redlands, Calif., 1940

A child for whom physicians and surgeons have recommended the daily care of nurses and physiotherapists

A child who must have transportation service to reach school, specially adjusted furniture, or other facilities

A child who needs special attention in vocational guidance, training, and placement

A child handicapped by cardiac complications or other medical conditions for whom no other provision has been made

A child who requires plastic surgery which must be followed by muscle training or speech training¹

The distinction between crippled children who need special education and those who do not, in large measure differentiates the school provisions that should be made for them. For the most part, children who require special medical or nursing care or who must be transported to and from school find their most satisfactory adjustments in special classes and in special schools. Under this plan buildings may be constructed or remodeled and special equipment installed to conform to their needs. Some of the more common features of buildings needed for crippled children include ramps in place of stairs, handrails in corridors, larger classrooms to expedite the use of wheel chairs, special solariums or rest rooms with cots, as well as special provisions for toilets and drinking fountains. Any of these special features may be incorporated in a special unit of the regular school.

The education of crippled children in junior high school should not be widely different from that of the general education provided for other children of similar mentality. Certain permanently disabling conditions restrict the vocational opportunities of children. Individual guidance should take this factor into consideration in building individual schedules for such children. It is doubtful, however, whether there should be a large amount of vocational or even prevocational training at the junior high-school level. Occupational therapies of various kinds obviously should be encouraged among children who are confined to beds or wheel chairs for a long period of time. Considerable ingenuity is needed to discover new or to develop acceptable, interesting social and recreational activities that will promote social development and social adjustment leading toward habits of sound mental hygiene.

¹ WHITE HOUSE CONFERENCE, *Special Education: The Handicapped and the Gifted*, p. 86. D. Appleton-Century Company, Inc., New York, 1931.

by all classroom teachers. Teachers should be familiar with the extent of public-health work being done in the community to eliminate sources of contact and to prevent further spread of disease.

Since physical strain is generally associated with the onset of pubescence, it is highly desirable to provide adequate work-rest programs for large numbers of junior-high-school pupils so that they may build up reserves of physical energy that will carry them through the critical period of rapid growth and development. A comprehensive review of the successful practices of public schools in providing special types of work-rest programs, both in regular schools and in residential schools, has been presented by Heck.¹

Frequently the school is able to build up the physical condition of delicate children during the regular school year, but often these gains are lost during the summer. There is strongly indicated a need for an extension of public-school provisions for delicate children during the summer months in properly supervised summer camps or in some kind of a modified health and recreational program centered in the school. A considerable number of health camps are being sponsored by local tuberculosis associations, service clubs, and public-school authorities.

The Adjustment of the Mentally Abnormal—Deviates from the normal with respect to mentality provide two roughly defined groups of exceptional children—the handicapped and the gifted. Distributions of mental ability among junior high-school pupils and in the total populations were shown in Chap. III. From these distributions it is obvious that there can be no sharp distinction among normal children, the gifted, and the handicapped. Mental differences among pupils are in degrees, and type classifications are fairly arbitrary.

The Handicapped—An application of the defensible classification principles and criteria suggested in Chap. V should result in the formation at the lower end of the several criteria scales of groups of pupils who cannot possibly profit from regular or average classroom instruction and who therefore require specialized treatment. Pupils in these groups are not devoid of talents, and hence such abilities as they have should be developed. Social efficiency demands that the subnormal be developed according to their ability to benefit. No amount of wishful thinking can impart potential mental ability to children who for one reason or another

¹HECK, ARCH O. *The Education of Exceptional Children*, pp. 313-337, McGraw-Hill Book Company, Inc., New York, 1940.



Open air convalescence room (Photograph courtesy of public schools San Jose Calif)



Convalescence room (Photograph courtesy of public schools San Jose Calif)

are deficient. One of the inexorable facts of life is the existence of individual differences with respect to mentality.

Mentally handicapped children usually include those having I Q's below 80 or 75. The proportion of retarded children in junior-high-school populations will vary with the exactness of measurements, the definition of the upper limit, the selectivity of the particular school population, and the magnitude of certain correlary personal and social qualities associated with individual deviations in intelligence. Normally, the proportion of such pupils will be found to range between 2 and 10 per cent of the pupil population. But whether the proportion of mentally retarded children is large or small, the educational problem is one of providing activities that will develop those capacities that each child does possess. This involves (1) a definition of the lower limits of mental ability required for success in the normal program of the school, (2) the discovery of all pupils below this level, and (3) provision of a suitable program for them in special classes of the regular school or in special day or residential schools.

Fourteen-year-old children with I Q's ranging between 70 and 50 are considered morons. These have mental ages ranging between 7 and 10 years and usually are incapable of benefiting from instruction in regular school but are capable of benefiting from special education. Special classes for dull or backward pupils or, as they are sometimes called, pupils with retarded mental development should be organized as opportunity classes in which instruction is paced slowly enough and in which both the materials and methods are chosen in accordance with the recognized needs of the pupils themselves. With these children there should be no question of grade status, for some will be so defective that they will be working with materials commonly allocated to the traditional second or third grade level.

Even though special classes for dull or subnormal pupils are provided within the junior high school, there are likely to be found a few individuals who are so feeble-minded that they will be unable to profit even in these opportunity rooms. Usually children below 50 or 45 I Q. will profit more from institutional care outside the school.

The Gifted—On the opposite end of distributions of mental ability are to be found a small percentage of pupils who are just as abnormal as those who are retarded in their mental growth. These are the gifted children who are variously defined as having I Q's

above 130 or 140. These children will constitute approximately 1 per cent of the total-junior-high school population. In Chap. III the nature of mental growth is described. In Chap. IV social factors affecting intelligence are presented, and in Chap. V certain grouping procedures are proposed. A consideration of all these factors is necessary in order to understand the problem of the gifted child. An application of the various grouping criteria suggested in Chap. V, for example, should result in the formation of groups that deviate widely from the average with respect to their mental ability, creative ingenuity, problem-solving ability, health and energy, personality, general information, and interests.

Social progress depends upon the early discovery and optimal development of the gifted child. On the whole, gifted children are probably the most neglected of all types of exceptional children. They are able to do superior work in the average school program with minimum effort, and usually they are clever enough to keep out of trouble. There is considerable evidence to support the conclusion that in regular classes superior and gifted children achieve less in proportion to their ability than any other group. In his study of gifted children, Terman¹ finds, for example, that the large majority of gifted children are working two or three grades below the level of achievement they have already attained. It is from this small percentage of superior children in each junior high school that the intellectual and professional leaders of tomorrow will be selected. It is a short-sighted social policy to permit such children to develop relatively permanent habits of intellectual indolence and social irresponsibility.

Within recent years there has been developing an encouraging trend of placing superior and gifted children in special classes that challenge their wide range of high-order talents. This trend is particularly noticeable in certain cities where populations are large enough to yield sizable groups of gifted children. Pioneering efforts in this direction are being made principally by the elementary school. Descriptions of several such programs are presented in the *Nineteenth Year Book of the Department of Elementary School Principals*.² It should be noted that there is no uniform agreement

¹ TERMAN, L. M., "The Gifted Student and His Academic Environment," *School and Society*, Vol. 49 pp. 65-73, Jan. 21, 1939.

² THE NATIONAL ELEMENTARY PRINCIPAL, "Meeting Special Needs of the Individual Child," *Nineteenth Year Book*, Vol. XIX, No. 6 Chap. V, pp. 379-434, July, 1940.

as to the best or the most suitable educational plan for superior children. Some advocate acceleration; some, enrichment; some, acceleration plus enrichment.¹

For the most part, it would be impractical to organize group instruction for the relatively few gifted children with very high intelligence quotients. Children ranging above 175 or 180 I.Q. may need to be placed in a special group of superior children for social development. But even here their academic development and interests will be highly individualized. Such children should be accelerated as rapidly as their social development will permit. Recent empirical evidence suggests that the possible dangers of acceleration have been greatly exaggerated.² Despite such acceleration, however, much emphasis should be placed upon socializing and enriching experiences for these children.

Along with children who are especially gifted in intelligence, special school provisions should be made for talented pupils in art, music, physical education, dancing, and in other special fields, although their general mental abilities may not approximate the level of the intellectually gifted. Although recognition should be given for special talents of this kind by providing special opportunity for further development, there is a need in the junior high school for thorough accomplishments in the regular school program.

The Adjustment of the Socially Maladjusted.—Another group of exceptional children are those who are socially maladjusted. Extreme deviates with reference to personal and social adjustment include those pupils who are delinquents, habitual truants, and those who are neurotic and psychotic. Many of these children are socially and economically underprivileged, and yet these factors are only contributory causes. Adjustments vary in kind and degree from these extreme cases of delinquency and truancy to the wholesome well-adjusted pupil who finds satisfaction in his everyday work and play experiences. Just where the line should be drawn between the normally adjusted and the maladjusted pupil is a question that must be answered according to whether the pupil can make reasonable adjustment and progress without disrupting the normal adjustment of other pupils. On the whole, the adjust-

¹ CARROLL, H. A., *Genius in the Making*, pp. 206-264, McGraw-Hill Book Company, Inc., New York, 1940.

² KEYS, NOEL, "Underage Students in High School and College," *Publications in Education*, Vol. 7, No. 3, University of California Press, Berkeley, 1938.

ment of socially maladjusted children can best be accomplished in a suitable regular school class. Since this is true, the problem becomes one that concerns all teachers. Factors contributing to emotional tensions and social maladjustments are described in Chap. IV. Basic guidance and adjustment procedures are presented in Chap. V. The educational program needed for any particular child will necessarily vary according to the underlying causal conditions and the seriousness of the maladjustment. In general, however, two factors seem dominant: lack of social approval and the frustration of strong personal needs. Consequently, when the specific causes of the maladjustments have been discovered, school situations should be provided that will result in successful experiences closely related to the needs of the child and in providing social approval for desired behavior patterns.

Important contributing causes to social maladjustment are low intelligence, physical handicaps, poor social environment, and emotional instability. Often the guidance and health program of the school, coordinated with various community agencies, are able to correct or at least to minimize the importance of these influences. Nevertheless, a distressingly large number of cases fail to yield to these adjustment procedures and become so serious that they cannot be handled in the regular school environment. In justice to normal pupils in school and in justice to socially maladjusted pupils, it sometimes becomes necessary to remove them from their degrading home and community environments and place them in parental schools or in a state training school designed specifically for such problem cases.

Recently considerable recognition has been given to discrepancies in civil and criminal law with respect to youths committing offenses against society. In most states under the civil law, youths are considered minors until they are twenty-one years of age. Under the criminal law, offenders under the age of sixteen are called juvenile delinquents and come before the children's or juvenile court; offenders over the age of sixteen are held criminally liable for their offenses as though they were legally responsible adults. This condition has resulted in the imprisonment of large numbers of youthful offenders along with hardened criminals in penitentiaries and other penal institutions. The number of correctional adjustments among youths who have "served time" is most discouraging. Instead, what is needed is more adolescent courts¹ to deal with

¹ BRILL, JEANETTE G., and PATNE, GEORGE E., *The Adolescent Court and Crime Prevention*, 230 pp., Pitman Publishing Corporation, New York, 1938.

youths from sixteen to twenty-one years of age, presided over by judges who understand the basic causes of adolescent behavior. Needed also are many effective residential schools, farms, or camps, wherein youths may be trained in better ways of living away from the insidious influences of poor local environments.

The peculiar responsibilities of the junior high school should be centered in the early adjustment of pupils in their personal and social relationships in school, at home, and in the community. If these basic adjustments can be made early in the school career of children, there is a possibility of preventing the development of more serious maladjustments. The junior-high-school age must be recognized as the crucial turning point in the lives of pupils. The chances for appropriate social adjustments decrease strikingly as children become more mature. When antisocial behavior of any kind has proved satisfying for a long period of time or when habits have been formed and friendships and associations established with others in gangs or clubs, it is particularly difficult to develop new attitudes, relationships, and behavior more in conformity with the requirements of society and perhaps less exciting and less satisfying to the individual. This task, however, must be faced by the junior high school, and since socially maladjusted children are to be found in every classroom, the problem is one that must be faced by all junior-high-school teachers.

SUMMARY

Between one-third and one-half of the total public school population in the United States has been classified as exceptional children by the White House Conference Committee of Exceptional Children. These children may be classified roughly into three broad groups: the physically handicapped, the mentally abnormal, and the socially maladjusted. Not only does each of these broad classifications present special educational needs but diverse subclassifications of each type likewise present unique problems characteristic of the particular deviate positions of pupils. The "education of all the children of all the people" implies that the schools should assume a major responsibility for the education of exceptional children. Although this is a relatively new service of public schools, an increasing number of school systems are accepting this responsibility. General provisions for meeting the individual needs of exceptional children involve (1) the discovery and understanding of needs, (2) optimal corrective and remedial measures directed toward causes,

(3) optimal adjustmental and developmental educational programs designed to meet specific needs, and (4) the removal of contributory and inciting causes in the school, the home, and the community

Standards for the identification of exceptional children vary widely. The principles underlying the special education of exceptional children are not greatly different from the principles underlying the newer education of all children. Differences are to be found in the specific needs of children, in the character of the instruction provided, in the amount and type of medical, nursing, and guidance services in building and equipment needs, and in the qualifications of teachers. All these factors are relative and point to the need for further research and for further coordination between the school and various agencies of the community. Specific programs for the education of exceptional children may best be evolved through cooperative endeavor within local school systems.

With a wider public understanding of the need for special education of exceptional children, increasing attention is likely to be given this problem, thus speeding up current trends in the organization of special classes as a part of public education. In this movement the junior high school occupies a particularly strategic position in that children of junior high-school age are entering into a phase of growth and development wherein corrective, remedial, preventive, and developmental procedures exert unusually strong influences throughout life in physical, mental, and social areas.

Since the educational problems created by increasing numbers of exceptional children in public school are relatively new, correctional and developmental methodology necessarily is in a transitional stage of evolution. Encouraging experimental plans are being tried in many institutions and in many school systems. Gradually there is being accumulated a fairly well patterned literature that points toward certain effective approaches to the solution of these new problems. As yet, however, there are few best procedures for the special education of exceptional children. The approach to the special education of exceptional children of all types should be evolved cooperatively just as other instructional or developmental procedures of the school.

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PART III

*The Program of Studies: The Center of
Developmental Activities*

CHAPTER VII

THE PROGRAM OF STUDIES

The junior-high school movement began as a reform over existing school organizations and practices. During the first decade of its existence, it appears now, too great dependence was placed upon the new structural organization and too little attention given to developing a new instructional program. The early program of studies of the new junior high school was composed in large measure of the seventh- and eighth-grade studies of the old elementary school and the ninth-grade courses of the traditional high school. Even in a new building and under a new principal, these older studies proved of little more interest or value to pupils than they had in their former settings. As a result, between 1920 and 1930 significant changes were observable in the programs of studies of many junior high schools. Since 1930, curriculum revision throughout the entire secondary school has been characterized by change and experimentation rather than by stability, and current interest and activity indicate even greater changes for the future.

The term "program of studies" is here used to include all the specified courses of study and all the planned and scheduled activities of the school. Thus broadly defined, the program of studies includes not only the regular classroom courses but all the extra-class activities as well.

The term "curriculum" has come to mean "all the experiences children have under the guidance of teachers."¹ Stated in other words, "curriculum is defined broadly enough to include any materials or activities that will affect the learning development or behavior of the child."² Specific uses of the term curriculum are made with reference to defined areas of experience such as the academic or college-preparatory, the general, the commercial or the

¹ CASWELL, HOLLIS L. and CAMPBELL, DOAK S. *Curriculum Development* p. 69 American Book Company New York 1935

² THE NATIONAL SOCIETY FOR THE STUDY OF EDUCATION. Child Development and the Curriculum. *Thirty eighth Yearbook* Part I p. 4 Public School Publishing Company Bloomington Ill. 1939. Quoted by permission of the Society

prevocational curriculums. The programs of studies of different junior high schools may be arranged according to curriculum types, such as the single, the multiple, the constants-with-variables, or the combination type curriculum¹

The term "course of study" refers to an organized body of materials or of planned experiences suitable for a semester's work at a specified grade level. The course of study usually includes a statement of objectives, of specific pupil activities, of the sources of all instructional material, of suggested teaching procedures, of time limitations, and of evaluative or appraisal techniques. In essence, the course of study is a fairly detailed set of plans that is to be followed during the semester. Any curriculum may be made of several courses of study that have ideational and sequential interrelationships.

The term "unit of work" or "unit of study" is used here in its commonly accepted sense as any unified division of subject matter or any unified series of experiences or activities that have meaningful bearing upon child life and child development. The course of study may be composed of a series of related units that are intended to provide a more meaningful organization of subject materials or experiences from the point of view of the pupil.

EARLY PROGRAMS OF STUDY AND PROGRAM TRENDS

Trends in the junior high-school program of studies may be illustrated by programs that are characteristic of the period 1919-1920 and 1929-1930. The data of Table XX are adapted from the illustrative programs presented by Loomis and Lide². Many factors influence the final effectiveness of the program or studies, but a casual inspection of the names of program offerings, of the time devoted to each, of their status as required subjects, and of their grade placement reveal some insight into the scope and limitations of the instructional program. The programs of studies cited as type I were selected by Loomis and Lide as being most typical of the general situation in junior high schools for the periods 1919-1920 and 1929-1930, respectively, those cited as type II were considered more representative of practices advocated by educational leaders.

¹ Koos L. V. *The Junior High School* pp. 140ff. Ginn and Company, Boston 1927.

² Loomis A. K., and Lide Edwin S., "The Program of Studies" Part I, pp. 55-59 *Bulletin* 1932 No. 17, *Monograph* 19 U. S. Office of Education, 1933.

TABLE XX.—NUMBER OF PERIODS PER WEEK DEVOTED TO VARIOUS REQUIRED JUNIOR HIGH SCHOOL COURSES IN ILLUSTRATIVE PROGRAMS OF STUDY By Types of Programs and by Grades for the Periods 1910-1920 and 1929-1930*

Courses	Type I						Type II					
	1910-1920 ^a			1929-1930 ^c			1910-1920 ^c			1929-1930 ^d		
	Grades			Grades			Grades			Grades		
	7	8	9	7	8	9	7	8	9	7	8	9
English							3	3	4-5	5	5	5
Grammar												
Composition												
Literature	8	8	7½	8	8	5				4*		
Penmanship												
Spelling							2†	2†				
Mathematics	5	5		5	5		3*	3*		5	5	
American history		5										
Citizenship, civics	½	1							2			3
Geography	5						3†	3†				
Social studies				5	5	5				4	4	
Hygiene	½											
Physical education	2	2	2	2	2	2				2	2	1
Art				2	2		1	1		1	1	
Music	1½	1½	1½	2	2	2	1	1	1	1	1	1
Industrial art or home economics	7½			5	5		2	2		2	2	
General science									2	1	1	2
Assembly and clubs										2	2	2
Guidance										3	3	3
Total periods per week	30	22½	11	29	29	14	15	15	9-10	39	26	17

* Adapted from Loomis, A. H. and Lide Edwin S. The Program of Studies pp 55-59
Bulletin 1932 No 17 Monograph 19 U S Office of Education, 1933

† Periods 45 minutes in length.

* Periods 60 minutes in length.

* Periods 50 minutes in length.

* Library and remedial or general language

† Penmanship and spelling.

* Arithmetic

* Geography and history

The following summary of the more significant trends in the programs of studies of junior high schools is adapted from the findings of Loomis and Lide ¹

¹ *Ibid* pp 266-271

- 1 A continuation of the single-type curriculum in grade 7
- 2 A curriculum of constants with restricted variables in grade 8
- 3 A curriculum of constants with more extensive variables in grade 9
- 4 Longer class periods
- 5 Lack of uniformity in both the names and content of various curriculums
- 6 A lack of integration between the courses offered in grades 7 and 8 and those for grade 9
- 7 An increased range of subject offerings
- 8 A lesser emphasis upon the academic or college-preparatory subjects, with the exception of English and social studies
- 9 A greater emphasis upon nonacademic, practical courses, such as library, journalism, public speaking, various prevocational courses, physical education, and fine and practical arts
- 10 A greater emphasis upon services and activities such as guidance, the discovery of adolescent needs, homeroom activities, extraclass activities in clubs and through assembly programs
- 11 An increase in the number of broad general cultural courses, such as English, social studies, and general language
- 12 In general, a wider recognition of the need for a richer and more varied program to meet individual differences

Changes in junior-high-school programs since 1932 have not been studied so systematically as those that were observed in the earlier periods. An inspection of the programs being conducted in various leading school systems suggests the continuation of trends begun earlier, although at present it is not possible to state how extensively such trends have continued in junior high schools generally. Particular trends that may be observed in selected schools include the following: (1) the continued development of general courses, (2) the development of core courses that are conducted in double and sometimes in triple periods, (3) the development of more functional courses related to pupil needs and interests, (4) the continued emphasis upon socializing experiences, (5) the extension of supplementary school services such as guidance, provisions for physically handicapped children, and other individualized services for all exceptional children, (6) a greater recognition and development of extraclass activities, (7) a closer articulation between the seventh- and eighth-grade courses and those for the ninth grade, (8) a closer articulation between the total junior-high-school program and those of the elementary school and the senior high school, and (9) an increasing emphasis upon immediate outcomes and values, as distinguished from the more remote academic values.

Representative of the newer junior-high-school program is that which has been developed for the junior high schools of Los Angeles, Calif. This program is shown in Table XXI.

TABLE XXI—THE NUMBER OF PERIODS PER WEEK FOR DESIGNATED COURSES OF THE LOS ANGELES, CALIF., JUNIOR-HIGH-SCHOOL PROGRAM OF STUDIES*

Courses	Grades					
	7		8		9	
	B	A	B	A	B	A
Social living core course	10	10	10	10	10	10
Physical education	5	5	5	5	5	5
Mathematics	5	5	5	5		
Science					5	5
Practical art	5	5	5			
Art and music	5	5				
Fine art			5			
Elective				10	10	10

* Adapted from *Modifications in the Program of Studies for the Junior and Senior High Schools of the City Los Angeles City School District Los Angeles, Calif. 1935-1939*

The revised sequence of units or themes suggested for the Los Angeles social-living core course for 1941 is as follows

B-7

COMMUNITY LIVING TODAY

Theme I	Our School
Theme II	Our Neighborhood
Theme III	Our City—Los Angeles
Theme IV	Our Region—Southern California
Theme V	Our State—California

A-7

NEW WORLD BEGINNINGS

Theme VI	Basic Concepts of World Geography (2 weeks)
Theme VII	Beginnings in the West (3 weeks)
	a Explorers
	b Colonial life
Theme VIII	Beginnings in the East (7 weeks)
	a Explorers
	b Colonial life
Theme IX ..	The Struggle for Independence (8 weeks)

THE UNITED STATES A NATION

B-8

- Theme I The New Government (5 weeks)
 a Study of the Constitution
 b Rights and duties of citizens
- Theme II The American Frontier (10 weeks)
 a Pioneer life
 b Territorial expansion by regions
- Theme III Men and Machines (5 weeks)
 a Development of industrial America
 b Social effects of the industrial revolution

A 8

- Theme IV The House Divided (5 weeks)
 Theme V Twentieth Century United States
 a The United States becomes a world power
 (5 weeks)
 b The United States today (3 weeks)
- Theme VI Review and Overview of the American Epic
 a Chronological history of America
 b Privileges and obligations of citizenship

WORLD CULTURES

B 9

- Theme I Life and Culture of the English Speaking Peoples
 of the British Commonwealth of Nations
 (emphasis on Canada Australia, Western Hemisphere
 geography) (10 to 15 weeks)
- Theme II Life and Culture of the Orient (5 to 10 weeks)

A 9

- Theme III Life and Culture of Mexico, Central America,
 and the West Indies (approximately 8 weeks)
- Theme IV Life and Culture of South America (approx-
 imately 10 weeks)
- Theme V Articulation to the Senior High School (This
 may be a strand of emphasis extending through-
 out the A 9 semester, or a short unit during the
 semester, or a combination of the two) (approx-
 imately 2 weeks)¹

¹ *Curriculum Improvement Guide for Junior and Senior High School Principals* pp 9-12 Los Angeles City School District, Los Angeles, Calif., 1941-1942

The junior-high-school objectives that are stated in Chap. I emphasize only one thing—the development of the individual pupil in society. The total program of study is designed to serve as the means whereby junior high school objectives may be realized. Theoretically, each subject is organized into units or courses that contribute to the development of the individual pupils. Today there is a growing recognition of the failure of the traditional subjects to meet important needs of pupils. One of the most significant trends in the entire field of secondary-school education has been the emerging program of curriculum revision that has gained momentum largely within the last decade. Experimental efforts to revise the curriculum have evolved through three stages: (1) revision by experts, (2) revisions by state and national planning commissions, and (3) revisions based upon continuous cooperative planning of local teacher groups directed by competent administrators and assisted by technicians and specialists. In general, present efforts to solve curriculum problems may be considered largely in the third step, although national planning commissions are contributing significantly to this total problem. The reasons for concluding that the usable instructional units and courses of study must eventually be produced in large measure through local teacher planning grow out of the conviction that effective curriculum materials must be related to the educational needs, problems, and resources of local situations and that the effective use of curriculum materials is restricted or enhanced by the value placed upon them by teachers in local situations. Conventional subject-minded teachers tend to nullify the best efforts of curriculum experts. Effective revisions are possible only when teachers appreciate the need for curriculum changes and are able to relate proposed revisions to the specific problems and needs of individual pupils.

PROBLEMS OF CURRICULUM ORGANIZATION

Some educational reformers are advocating that secondary school programs must be made so informal that the regular scheduling of planned instruction should be abandoned. In a reorganized society, it is possible to conceive that such an ideal condition might exist. However, under present conditions, which require the attendance of large numbers of pupils in the junior high school with a limited instructional staff and facilities, it is difficult to think of an effective instructional program that does not follow a carefully evolved schedule. For the present, at least, it would seem

that certain practical administrative routines and procedures must be followed in order to provide appropriate developmental experiences for junior high school pupils. Attention should therefore be directed to five basic problems that confront those who would organize curriculum materials for junior high-school education. These are the problems of (1) articulating selected junior-high-school materials with those of the elementary school and of the senior high school and of interrelating the courses of the three grades of the junior high school, (2) placing curriculum materials with reference to the grade and developmental levels of pupils, (3) establishing the time allotment for units and courses, (4) determining the required or elective status of subjects or experience areas, and (5) determining criteria for the selection and organization of curriculum materials and procedures.

Articulation—The importance of providing an instructional program that will result in continuous developmental experiences for pupils as they move from one grade to another or from one division of the schools to another is pointed out in Chap. I. The problem of organizing curriculum materials so as to accomplish this result is one that challenges the ability of teachers, administrators, and experts. In modern education, the traditional achievement differences between pupils in different grade levels has broken down to such an extent that grade levels no longer serve as an adequate basis for planning continuous experiences for pupils, and hence the use of the conventional grades of junior and senior high schools for this purpose serves to impede the development of more effective programs. Individual differences among pupils clearly indicate a need for abandoning these older grade classifications. Individual differences indicate further the need for the adoption of some plan of classification for instructional purposes such as that suggested in Chap. V. But whatever means of classifying pupils may be used, there remains the basic problem of so organizing the instructional program that the developmental experiences of pupils may proceed from one school unit to another with the greatest continuity.

Placement of Curriculum Materials—Under current practices of the traditional grade organization, the problem of the placement of curriculum materials involves their allocation to designated grade levels. More fundamentally, this problem involves a consideration of the learning readiness of pupils for specific developmental experiences. When class differentiations are made within

a given grade two problems are involved. That is, a decision must be made first with reference to the grade level, and then further differentiations of the curriculum materials must be made with reference to the observed abilities and the needs of specific class groups within that grade.

Discovering the ability of pupils to profit from given curriculum materials or activity experiences is one of the most baffling problems of the entire field of curriculum organization. In this problem, seemingly innumerable factors are influential. Consideration must be given to the level of mental ability, to previous achievements in related areas of experience, to physiological maturity, to emotional balance, to personality adjustments, to pupil interests, to socio-economic conditions of the home, to psychological aspects of the environment, and to various other factors affecting the present learning readiness of pupils. Obviously, a knowledge of these factors, including their interdependence can be secured and interpreted best by classroom teachers through the application of the most superior of the available techniques for studying pupils and their problems. These considerations have direct bearing upon the means that are used for determining the appropriate placement of curriculum materials and procedures.

Time Allotment.—Administrative decisions must be made with reference to the time allotted for studying various subjects or pursuing various activities that are scheduled as a part of the program of studies. The prevailing practice of dividing the school day into class periods of equal length expedites the administration of a varied program of group instruction for large numbers of pupils, but it restricts the flexibility of the program with reference to the needs of individual pupils. The length of the class period likewise influences the time that is to be allocated for subjects as well as the facility of teachers in providing for individual differences. Thus a larger number of shorter class periods facilitates scheduling more subjects but restricts the time that may be devoted to them. A smaller number of long periods encourages the development of more general courses of the core type and provides greater opportunity for individual teachers to adapt varied materials to pupil needs. The length of class periods and the number of class periods per week that are scheduled for specific activities is thus an important part of planning selecting and organizing curriculum materials.

Various plans have been used in an effort to adjust time schedules to individual pupil abilities. Outstanding among these are the

Dalton¹ and the Winnetka² plans, which provide individual time schedules for the completion of units and projects. When the problem of time allotment is considered in isolation, that is, apart from the need for differentiating curricular content and procedures, as well as time schedules, individual contract plans are effective. The total problem of organizing curriculum materials, however, involves factors other than that of time allotment alone.

Required or Elective Status of Subjects—Another perplexing problem that must be answered through the organization of the curriculum is what subjects or experiences shall be required of all pupils and what subjects or experiences shall be offered as electives from which pupils may choose. At present, there is little agreement on this point among educational leaders or in current junior high school practices. Indeed, the whole question of what constitutes the essential elements of common-school education is being attacked by educational leaders with increasing vigor.³

Before 1930 the trend of junior high school practices was in the direction of the type of curriculum known as the "constants-with variables." The specific subjects that were considered essential for all pupils were included in the program as constants in each type of curriculum. The variables were offered as electives. More recently the trend has been in the direction of the core curriculum, which is designed to include the common knowledges and experiences needed by all pupils. The essential difference between the newer core curriculum and the older group of required or constant subjects lies in breaking down subject barriers or, from the positive point of view, in the development of broader functional experiences that involve several of the more traditional subject courses.

Various names have been applied to the idea of the core curriculum. Such terms as fusion courses,⁴ "integration courses," and "correlated subjects," are commonly used. The term "core

¹ PARKHURST HELEN *Education on the Dalton Plan* George Bell & Sons Ltd. London 1930

² WASHBURN, CARLETON *Adjusting the School to the Child* World Book Company Yonkers-on Hudson N Y 1932

³ SPEARS HAROLD *The Emerging High School Curriculum* pp 42-72 American Book Company New York 1940 MORRISON H C *The Curriculum of the Common School* 681 pp University of Chicago Press Chicago, 1940 PROGRESSIVE EDUCATION ASSOCIATION COMMISSION ON THE SECONDARY SCHOOL CURRICULUM *Science in General Education* 591 pp D Appleton-Century Company Inc New York 1938 and *The Social Studies in General Education* 401 pp D Appleton Century Company, Inc, New York, 1940

curriculum" seems to be more appropriate, because it is more nearly descriptive. This term implies merely an organization of a common body of knowledge that it is desirable for all pupils to experience. In current interpretations of the core curriculum, the emphasis is being placed upon pupil experiences in common areas rather than upon an identity of experiential content. The differences among pupil groups in terms of either achievement, abilities, or grades are such as to demand the differentiation of content even within the core curriculum. The term "social living" is sometimes used to connote the essential aspects of the core curriculum. The status and the purposes of the social living course are interpreted for the Los Angeles junior high schools as follows:

Social living is a basic double period course required of all pupils throughout grades seven, eight and nine in the eighteen junior high schools of the city. As a unifying and guidance center in the junior high school core curriculum, it provides for a primary emphasis upon the well rounded growth and development of every pupil. Educational experiences are planned in terms of value inherent in contributions from social education, language arts, personal problems, literature, fine arts, appreciation and related fields. It is thus more than a correlation of English and social studies including geography. It represents a type of educational organization which creates a better educational environment in which to help pupils to mature and to help them as growing personalities to meet more effectively life problems which they are facing.¹

Regardless of the names used to describe courses of study or the type of curriculum that is being used, decisions must be made with respect to the required or elective status of the instructional materials provided for pupils in the junior high school. Basic to such decisions is a consideration of defensible criteria for the selection and organization of curriculum materials and procedures.

Criteria for Selecting and Organizing Materials—From the interpretation of pupil problems and social needs emphasized in Chaps. II, III, and IV, it should be clear that the basic criteria for the selection and organization of curriculum materials and procedures must be found in pupil problems and social needs. In fact, the principal point of emphasis of the entire present volume is upon the unique contribution of the junior high school to the junior high school pupil in society. The difficulty of considering as criteria

¹ RODGERS, HELEN J. Promising Practices in Secondary Education edited by Hess, Walter E. and Ebecker, Paul E. *Bulletin of the National Association of Secondary-school Principals* Vol. 24 No. 92 p. 80 October 1940.

such broad objectives as total pupil welfare and institutional progress lies in the variable interpretation that may be placed upon them and in the variable selection of means by which these may be accomplished. However, if educational objectives are to serve as criteria, these should challenge rather than deter those who are responsible for the selection and organization of the junior-high-school curriculum. The fact that we do not know with certainty what junior high-school pupils should learn this year and at this stage of our democratic evolutionary development is one of the most encouraging signs of institutional progress. The solution to the problem of selecting curriculum materials must be found through democratic procedures applied to education, a procedure that has been aptly described by Mazzini in defining democracy as "the progress of all, through all, under the leadership of the wisest and the best."

At least two practical criteria must temper the ideal selection of curriculum materials in accordance with pupil and social needs. These are the resources of the community and the cost of the materials in relation to the ability of the community to support the contemplated program.

One stimulating point of view which is presented "as a basis, a foundation, upon which to build a program for curriculum revision at the secondary school level" is found in Williams's *Curriculum Credo*:

1 I believe we must make more use of pupils' immediate interests than we have done in the past. They must be used for what they are, however, foci of attention around which to organize learning situations and present instructional materials. Likewise, and moreover, I believe that we must also do much more than we have in the past, first, in arousing interests in the pupils which they have not recognized and, second, in providing means by which students may come to recognize the worth of remote and deferred interests as motives for the study of facts, of forms, of rules, processes, techniques, and the like.

2 I believe in our zeal for utilizing interests as drives for learning we have forgotten one characteristic feature in the nature of normal adolescent boys and girls. They do desire, at times, to be "told what to do," and they wish to be checked up from time to time to see if they have done it. We are cheating our pupils out of opportunities for gaining valuable life experiences when we *always* use *their* interests and never use compelling interests outside of their own lives as forces driving them to activity.

3 I believe we are at present unable to use so-called maturation levels of pupil interests as guides in setting up a sequence of courses, or within

courses—to say nothing of using them in determining curriculum sequence. We cannot so use this guide for determination of sequence because we do not know if there is such a sequence, and if there is we do not know either what it is or what conditions it

4 I believe high school boys and girls rebel at “doing things which are hard” because, for the most part, the so-called hard things do not bear very much relation to concrete situations which are very real to pupils—they recognize no earthly use in doing them. In consequence, I believe high school pupils can be stimulated to do hard things when they can be made to recognize that these things do have some relation, even if deferred, to actual life situations. Pupils are not disturbed over the difficulties present in a situation but they are thoroughly upset over the futilities in any given set of activities.

5 I believe that many current theories and practices with respect to the secondary school curriculum lack proper emphasis upon the idealities of civilization—which are none the less real—and overemphasize phenomena—which are so often only fleeting external manifestations of reality. The philosophy of opportunism and of immediacy is standing at the door of learning, even as it is at the door of our government, and challenging every unit, demanding that each show its credentials of direct and immediate application to the here and now.

6 I believe we are wholly wrong in the oft-repeated modern dictum that “the purpose of schools is to keep children happy.” The real purpose of schools, to my way of thinking, is to help pupils to learn—to experience—the joy of achievement. In this current emphasis upon happiness as the end of school activities we are suffering from educational myopia, we are too concerned with the transitory, the superficial, we are sacrificing a greater good for a lesser joy, we are depriving youth of chances to develop fiber and strength needed to meet a world—and a society, an ideology—“red in tooth and claw.”

7 I believe we are wrong in our current discussion and practice which tends strongly toward disregard for learning as a scholarly pursuit and substitutes learning for social purposes only, selecting and applying information only in the light of social conditions. It is my belief that there is real satisfaction, real “happiness” if you prefer, in the pursuit of knowledge, even for adolescents. Intellectual exercise, learning as such, does satisfy a personal, an organismic need.

8 I believe that no adult and no group of adults is wise enough to select for youth a given body of facts or determine a set of fixed behavior patterns for them. Equally, I believe that broadly trained and widely experienced adults can do much toward helping youth to select for themselves bodies of information and patterns of behavior. That is what the great majority of them do anyhow—with or without assistance. We cannot, if we would, live the lives of youth for them, they must live their own lives, we can and we should provide a favorable climate for their growth.

9 I believe that if there is to be developed a core curriculum, the core must place emphasis first, upon helping youth to find out what are and have been the tools of civilization, the instruments, the methods, by which man has learned about and made his way around in his world of things, of affairs, and of other living beings, second, emphasis must be placed upon helping youth to acquire skill in the use of these tools, these techniques, so that he too may adjust with his world of things, of affairs, and of other living beings

Such a core will have to be supplemented increasingly from the tenth grade onward with provisions by which individual nptitudes and interests, special means of gaining particular experiences vicariously and directly, can be offered as channels through which the function of differentiation can operate

10 I believe we should not go on thinking, and writing and talking about the core as either social, scientific, or aesthetic, or literary in nature. If such a core as is suggested above is to be built up, it must have as its body and its substance *human experience*, without asking if that experience is, or can be, classified as history, or science, or art, or English. In other words, it is my belief that the core portion of the core curriculum should not center around *subject-matter* divisions of human experience, although use will have to be made of such divisions as *sources* for the opportunities it is wished to provide pupils, the non-core portion of the core-curriculum should be centered around *subject-matter* divisions

11 I believe that such a type of core curriculum is and must be used as the very heart and center of the guidance program. Those in charge of the core (or basic) courses are in the very nature of the case in the best position to aid and direct individual students in gaining an understanding of social, economic, domestic, industrial, academic, scientific, and the like, conditions of life and living. These persons become, therefore, the active agents of guidance programs and policies as well as having a large voice in determining the programs and policies. Administrators will do well to give ample consideration to the problem of setting up an organization plan in such a manner that the opportunities offered by the core curriculum may be capitalized upon to improve our counselling and guidance practices

12 I believe that we must give more vigorous and more extended thought to setting up *specific* goals to be attained as the result of our class work. We must set up goals as earmarks, so to speak, by which we shall be able to *recognize progress*, or lack of it, toward the realization of these goals. This means we must first set up definite goals, then we must agree on what will constitute evidence that students are advancing toward these goals, then we shall have to devise instruments and devices for collecting the evidence, then we shall have to devise systems of records and report forms by which to designate degrees of progress toward the specific goals

13 I believe that, in this matter of records, because we are caught in a nation-wide system of schools and colleges which operates in accordance

with a schedule of marks and marking systems, we shall for the present be obliged to continue the use of marks at the high school level in describing the *scholastic* progress and achievement of pupils. I also believe that we must engage vigorously in a study and trial of procedures by which we may be able ultimately to record with some considerable degree of reliability and understanding the growth and development of pupils in the so-called intangibles of the educative process. At the present time it would appear that the development of some kind of a *descriptive* rather than of a rating scale holds the most promise for a satisfactory solution to this problem.

14 I believe, in summary, that the secondary school curriculum should provide rich and abundant opportunities for students to

- a Become acquainted with subject-matter in wide areas of human knowledge and experience
- b Learn how to use with accuracy and skill essential tools for acquiring more knowledge
- c Become skillful in the use of language as a means of thought and a medium of expression—remembering that language refers to symbolic representation of ideas, emotions, and the like
- d Understand the factors which condition their growth and development—physical and intellectual, emotional, aesthetic, and the like
- e Learn about and understand the internal and external controls of their physical, social, intellectual, civic, aesthetic behavior
- f Acquire sets of standards by which to govern their behavior—intellectual, physical, social, and all the rest
- g Become skillful in making applications of these standards to a wide variety of life situations
- h Develop *abiding* interests in constructive life activities which are of personal (individual), and of social worth
- i Have abundant practice in doing straight (logical? critical?) thinking in a wide variety of life situations
- j Participate frequently in initiating, planning, executing and evaluating courses of action—not only in practical but also in academic situations.
- k Be thrown on their own responsibility for independent action and be held strictly accountable for the results
- l Learn (experience?) the joy of achievement and of completing successfully a difficult task.
- m Become familiar with the nature and characteristics of the social order in which they live
- n Learn about their own personal aptitudes and tendencies—or lack of them

- o Learn how other persons, in other times, in other places, have dealt with great problems of life and living ¹

THE MEANS OF SELECTING AND ORGANIZING CURRICULUM MATERIALS

Various means may be used to select and organize the junior-high-school program of studies. The traditional practice of selecting academic subject courses that are based upon a restricted single textbook is now largely discredited. Increasing recognition of the fact that many vital educational problems of pupils grow out of given local situations and that changing conditions and needs demand a continuous reconstruction of curriculum materials and procedures has emphasized the need for cooperative planning, involving the participation of all certificated personnel of the school, the pupils, and cooperating community agencies. As early as 1932, Lide² reported a fairly extensive development of cooperative curriculum revision plans that were city-wide, county wide and nation wide in scope. In general, the organization for curriculum revision in city school systems followed the plan of creating teacher committees representing special fields and special interests for the purpose of studying pupil problems and needs and for developing tentative or final courses of study and curricular organizations to meet those needs in the various levels of the school system. Trends in the development of administrative procedures in representative school systems may be seen in data presented by Lide,³ Caswell and Campbell,⁴ Trillingham,⁵ and Spears.⁶

From an evaluation of current practices, certain administrative devices and procedures appear to lend themselves to more effective curriculum revisions in relation to local needs and conditions. Notable among these are the organization of four types of committees, namely

¹ WILLIAMS L. A., 'A Curriculum Credo,' *University of California Syllabus, School Executives' Conference* pp 49ff F W Hart, director Berkeley, Calif, 1941

² LIDE, EDWIN S. "Procedures in Curriculum Making" 99 pp, *Bulletin* 1932 No 17 *Monograph* 18 U S Office of Education, 1933

³ *Ibid.*, pp 16ff

⁴ CASWELL and CAMPBELL, *op cit*

⁵ TRILLINGHAM C C, *The Organization and Administration of Curriculum Programs* University of Southern California Press Los Angeles 1934

⁶ SPEARS HAROLD *Experiences in Building a Curriculum* 196 pp, The Macmillan Company New York, 1937, and *The Emerging High School Curriculum*, 400 pp., American Book Company, New York, 1940

- 1 A central or city wide planning and coordinating committee
- 2 Divisional city wide planning and coordinating subcommittee representing each of the elementary, the junior high, the senior high, and the junior-college divisions
- 3 Divisional production committees that essentially are subcommittees of the divisional coordinating committees. The production committees for the junior high school and for the senior high school are further divided into subject area committees
- 4 Faculty curriculum committee for each local school within the system

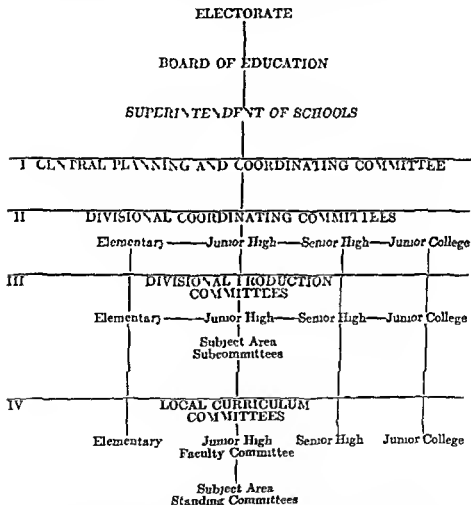


FIG 28—A cooperative curriculum-organization plan for junior high schools in a city school system

These committees for the junior high school division are shown in Fig 28

In the following discussion of committee organizations, a number of desirable and feasible relationships and responsibilities are indicated. It should be remembered that community conditions differ widely, and hence no one type of administrative organization will prove satisfactory for all school districts.

The Central Instructional Coordinating Committee—The central coordinating committee should be responsible for formulating the educational philosophy of the school system, particularly with respect to the principles and procedures affecting the instructional program. Specific duties that may be allocated to this committee include (1) determining the grade placement, time allotments, and status of school subjects, (2) promoting the interrelationship of courses and the closer articulation of divisional units of the school system, (3) surveying community resources and discovering educational needs, (4) planning for variation and flexibility in the programs of individual schools, (5) reviewing recommendations of divisional subcommittees, and (6) planning controlled experiments directed toward the discovery of increasingly effective selection and organization of instructional materials and procedures.

The superintendent of schools should be the chairman of the central coordinating committee. There are several reasons why this is a desirable arrangement. In the first place, the superintendent is legally responsible to the board of education and to the community for the instructional program of the school. Furthermore, the chairmanship of this committee provides the superintendent with an excellent opportunity to exercise educational leadership throughout the entire school system. Then, too, by virtue of his office, the superintendent sanctions the cooperative city wide endeavor of all school personnel to improve the curriculum during the various stages of its revision and development. Such sanctions stimulate the efforts and inspire the confidence of all school personnel who are participating in the enterprise. Other advantages that accrue to the superintendent in this position are (1) opportunities for a closer study of all personnel, which enable him to discover and to promote to positions of leadership the more able persons in the school system and (2) opportunities for his own professional improvement and growth because of his direct contacts with the entire school system and his enforced educational leadership over the developmental and creative efforts of the school staff.

The executive secretary of the coordinating committee should be the director of curriculum. The director of curriculum is already

responsible to the superintendent for this work and is presumed to be familiar with the entire field of curriculum planning and revision, including familiarity with the professional literature and the experimental efforts of other school systems. As executive secretary, the director of curriculum is thus in a position to serve as the technical advisor of the coordinating committee and of various subcommittees.

In addition to the chairman and the executive secretary, who really constitute an executive committee and carry on the burden of the responsibility for planning, coordinating, and stimulating the work of the entire committee, there may be the following members:

- 1 The director of research and guidance
- 2 The directors of elementary, secondary and adult education
- 3 The directors or supervisors of instructional areas
- 4 The head of the public relations office
- 5 The director or supervisor of school libraries or a representative school librarian
- 6 Selected representatives of the congress of parents and teachers of service clubs of federation of churches and of other community agencies as local conditions indicate
- 7 Principals representing each school division selected by the superintendent and the director of curriculum or chosen by the local principals' association
- 8 Teachers representing each school unit chosen by the local classroom teachers association. A sufficient number of teachers should be chosen to represent all instructional areas as well as each division of the school.

Obviously, the titles suggested above will vary in different school systems, and the positions suggested will vary according to local needs. In general, however, the membership of the coordinating committee should be representative of the entire school system and of community activities and interests.

The Central Divisional Coordinating Committee—The divisional junior high school coordinating committee is concerned particularly with curriculum materials and procedures for all the junior high schools in the city. It may function as a subcommittee of the central coordinating committee, and should be concerned with interpreting and implementing policies and procedures initiated in the central coordinating committee, in terms of the junior high school. In addition, this committee may (1) initiate plans for the development of instructional materials (2) appoint members of various instructional area subcommittees (3) render technical and coordinating advice to instructional area subcommittees, and (4) inform the central coordinating committee of progress on various projects undertaken.

The director of junior high school instruction or the director of the secondary-school curriculum should be the chairman of this committee. The executive secretary should be the curriculum director for the entire city system. Other members, in accordance with local needs, may include

- 1 All or representative junior high school principals
- 2 Junior high school supervisors
- 3 The director of elementary instruction
- 4 The director of senior high-school instruction
- 5 The director of guidance
- 6 The director of objective aids or the director of libraries
- 7 The chairman of all junior high-school instructional area subcommittees

The Central Junior-high-school Production Committees—In addition to the planning and coordinating committees for the city as a whole and for the junior high schools of the city, there is needed a group of committees concerned with the production of courses of study and units of instruction in the several subject fields usually included in the junior high school program. These committees should represent all the special interests of the junior high school and may be called by their usual subject names, such as English, mathematics, science, or music committees or the basis for classification may be broader, and they may be called by such titles as social living core, world culture, or industrial arts committees. The general function of the production committees is that of creating and organizing curriculum materials and procedures. Each committee may have subcommittees concerned with special functions, such as committees on objectives, appraisals, guidance, objective aids or on other specific aspects of the total problem with which the larger committee is concerned. The production committee as a whole should be considered a subcommittee of the junior high-school coordinating committee.

Membership of the production committees is made up largely of representative teachers from the several subject areas. It may be desirable for each of these committees to include teachers from related areas and in some cases teachers from the same subject area but from other divisions of the schools in order to promote proper articulation between the programs of different divisions. Special subcommittees within each subject field should be made up of teachers whose major interests are closely related to the function assigned. Subcommittees on guidance might well include home-room teachers, counselors, the director of guidance, and the school

psychiatrist, the committee on appraisal might include teachers who are versed in the techniques of measurement and appraisals. Each committee should have the privilege of calling in for consultation such experts and specialists as may be available in the local area.

The actual task of developing usable guides for instruction in accordance with principles and policies that have been determined by the planning committees is thus assigned to the classroom teachers who compose the production committees. It is their responsibility to select and systematize effective means by which junior high-school objectives may be realized through suitable instructional materials and procedures. Other specific responsibilities of the production committees involve (1) developing more effective measurement and appraisal instruments, (2) formulating procedures for the effective use of various objective aids, and (3) informing librarians with respect to the reference needs of various subjects and instructional units. Basic to the entire operation of these committees is the responsibility for discovering educational needs of pupils and of the community in order that these needs may provide a guide for the organization of instructional materials.

In the actual work, each production committee follows the general outlines for developing a good course of study. The social living committee, for example, may be concerned with developing a course of study or a guide for instruction in the area indicated for each of grades 7 to 9. Some of the more salient points that should be included in such a guide for instruction are suggested in the following outline.

OUTLINE OF A GUIDE FOR INSTRUCTION

- I Introductory statement
 - 1 Grade level intended
 - 2 Status required elective
 - 3 Time allotment
 - 4 Suggested individual and group differentiations
 - 5 Suggested general procedures for effecting interrelationships with other areas
- II Proposed contributions to the educational program
 - 1 General education objectives
 - 2 Specific junior high-school objectives
- III Units of work
 - 1 Contributions of each unit to objectives
 - 2 Suggested procedures for each unit
 - 3 Suggested time allotments for each unit

- 4 Materials of instruction for each unit
 - a Basic content
 - b Supplementary materials
 - c Interpretative materials
 - d Collateral sources
 - 5 Suggested individual and group differentiation for each unit
 - 6 Specific procedures for interrelationships with other units
 - 7 Variety of sequence of units
 - 8 Suggested motivational procedures for each unit
- IV Suggested means for evaluation
- 1 The measurement of pupil progress and development
 - 2 The appraisal of the effectiveness of the unit from the point of view of the teacher (to be completed by the teacher as a report to the production committee)
 - a Pupil accomplishments and failures
 - b Relation to individual pupil interests and needs
 - c Adequacy of time allotment
 - d Suitability of grade or group placement
 - e Relation to previous units in course of study
 - f Changes recommended

When a unit or a course of study has been outlined according to some such plan as that suggested above, it is submitted to the production committee as a whole. After review and revision, it is then submitted to the junior high-school planning committee, which again reviews the course of study from the point of view of unity and sequence. After this revision, the course of study is submitted to the planning committee for the entire school system for general approval. When it has been approved by the central coordinating committee, the course of study is ready to be submitted to the curriculum committee of the local junior high school, to the standing faculty committee concerned, and, finally, to the appropriate classroom teachers, who may have had a part in its development.

The Curriculum Committee of the Local Junior High School — The faculty as a whole should be considered the curriculum committee of the local junior high school. Special subject-area interests may be represented through standing faculty subcommittees. Other standing committees may be concerned with special instructional problems, such as objectives, appraisals, or guidance. When courses of study have been completed by the planning and production committees for the school system as a whole, and for the junior high-school division in particular, they are then referred to the local junior high-school faculty for consideration. The initial review and suggested modifications are made by the respective standing committees most concerned with the specific course of

study The faculty as a whole is concerned with the final form of the course of study from the point of view of its interrelation with other courses of study, its suitability for specific local conditions and needs, and with its contributions to the educational problems of pupils Final responsibility for the use of the course of study in the classroom with a defined group of pupils must necessarily lie with the individual classroom teacher

In general, the organization of the curriculum committee of the local junior high school, composed of the general faculty, with its subcommittees, should enable all teachers (1) to familiarize themselves more thoroughly with projected plans and to exchange ideas for putting such plans into operation in their respective classes both before and during the use of the plans, (2) to compare the results of procedures used in carrying out plans, (3) to recommend needed changes in courses of study, and (4) to formulate statements of pupil needs under the specific conditions of the local school community When such statements are referred to the production committees, they may be used as a basis for further revision

The membership of each of the committees suggested here for the cooperative development of curriculum materials and procedures is composed largely of classroom teachers working together under the educational leadership of administrators and specialists It should be emphasized that classroom teachers participate in formulating policies and decisions affecting instructional materials at each stage of their development The classroom teachers themselves are particularly responsible for providing information as to pupil needs in local school communities and for seeing that practical and effective means are developed for meeting these needs They are accorded the right to make the final changes in the application of the courses of study to local classroom situations They are expected, however, to report to the production and the planning committees on such changes and on the success and failure of all units and courses of study

OUTCOMES OF COOPERATIVE PLANNING

The essential features of a cooperative organization such as those suggested here should produce usable courses of study that are of direct value to individual teachers, to pupils, and to the school system as a whole When such a plan has been in operation for several years, so that it has evolved beyond the experimental stage and so that the organization is definitely suited to local needs, several con

comitant outcomes are to be expected along with the development of superior curriculum materials and procedures. Among these should be noted

- 1 A continuous reconstruction of the curriculum in accordance with a progressive discovery and understanding of pupil and community needs with a consequent better placement of units and courses

- 2 A continuous in service growth and training of all teaching and administrative personnel which results in a greater appreciation of the need for more suitable materials and procedures

- 3 A more adequate consideration of all divisions and services of the entire school system in relation to one another, thus promoting greater articulation and balance

- 4 An effective means of discovering and capitalizing the abilities of the teaching staff which stimulates them to put forth their best efforts

- 5 A higher professionalization of all personnel through closer cooperation and understanding of the various points of view of administrators and teachers

- 6 A greater democratization of the school system through a wider participation in and a sharing of responsibilities for the development of the instructional program

- 7 Systematic opportunities for the wider dissemination of promising practices in classroom instruction

- 8 Through cooperative planning involving community agencies promotion of a better understanding of the schools on the part of the community and a better understanding of the community by school personnel

The realization of such outcomes, obviously, is dependent upon the educational leadership of responsible administrative personnel and upon the wholehearted participation of teachers and community agencies. The time that is required of teachers in such a program of revision is enormous and should be scheduled as a part of their regular teaching load. The difficulties and obstacles of curriculum revision, which are seemingly insurmountable from the point of view of the expert working alone, may be attacked successfully by school systems that are willing to trust and use democratic procedures involving the human resources of the schools and of the community.

SUMMARY

The junior high school program of studies has been evolving since the beginning of the junior high school movement. In general, trends are in the direction of courses of study that are intended to meet the vital educational needs of pupils of junior high school age as these needs are interpreted in relation to social and economic conditions of the local community. More specifically, trends are

toward longer class periods, core courses, or core curriculums that are more appropriate for pupils today. Increasing attention is being given to certain newer services, such as guidance, extraclass activities, provisions for instructional adjustments in accordance with individual differences, and provisions for the education of exceptional children.

Successful efforts to revise programs of studies point increasingly toward the use of cooperative plans involving the best efforts of teachers, administrators, and community agencies as the best of available means for this purpose.

Cooperative revisions tend to produce more suitable materials and procedures, promote the professional growth of teachers and administrators, create better working relationships among all school personnel, and interpret the school to the community and the community to the school. Cooperative planning for instructional needs is a democratic procedure that provides for "the progress of all, through all, under the leadership of the wisest and the best."

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CHAPTER VIII

TEACHER PLANNING

When the junior-high-school teacher is given an assignment of five or possibly six different courses of study to teach, with decisions already made as to the grade level, time allotments, the required or elective status of the subjects, and the general relationships of each course to other courses in a curriculum, he is immediately confronted with a number of problems that involve many decisions and extensive planning. Often the titles of courses are only vaguely suggestive of desired outcomes or of the essential subject content. In formulating objectives, in selecting subject materials and activities, and in evaluating the outcomes of classroom activities, teachers must take into consideration the interrelation of a whole matrix of factors involving pupil abilities, interests, and needs, and factors affecting social welfare or social progress in general.

In school systems where cooperative planning for instructional needs is being practiced, many superior plans are produced, and much time is saved for the individual teacher. It must not be supposed, however, that the critical function of directing the learning experiences of pupils can be accomplished in committees that are isolated from the groups themselves. Irrespective of the adequacy or comprehensiveness of the work that may be done in teacher planning or production committees, there still remains the artful adaptation of the unit or the course of study to specific classroom situations. Indeed, planning instructional activities is a basic aspect of every teacher's work.

Beginning teachers sometimes suppose that the experienced teacher's work has required very little planning because of the ease and smoothness with which class activities are carried along. Although it is true that experienced teachers frequently find it unnecessary to write out detailed daily lesson plans, nevertheless even superior teachers find it necessary to plan and prepare carefully for each day's activities. Neither the instructional guide, the course of study, nor the modern textbook can relieve the teacher of the responsibility for careful planning. To be sure, the textbook

and the course-of-study outline are helpful aids, but these should be regarded as flexible blueprints or, at best, as directional maps that must be translated into pupil experience. The most carefully laid general plans for classroom activities must invariably yield to changing conditions within the classroom as these develop, for it is impossible to anticipate the innumerable unexpected and unforeseen situations that arise under varied classroom conditions. Yet although it may be necessary to modify plans even radically, it is generally better to have a carefully prepared plan that may be changed than it is to depend upon inspiration that may or may not grow out of immediate classroom situations.

Trends in the newer and more promising instructional practices emphasize the need for teacher planning and point the directions that these plans must take to keep pace with modern education. The following list of trends or principles that are characteristic of the newer instructional practices are adapted from a summary of trends by William H. Burton.

- 1 The assignment-study recite-test stereotype is being replaced by the concept of functional learning, with emphasis upon the unit of experience and the purposes of the learner.

- 2 The bases for the scope and sequence of curriculum organization are to be found in the life functions of society and of the individual. Increasingly, the core of the curriculum is being stated in terms of desired experiences rather than in terms of required subject matter.

- 3 The study of special subjects is being restricted to college preparatory, vocational, or special ability needs.

- 4 The planned curriculum and the planned course of study is to be preferred to the unplanned curriculum.

- 5 Strictly prescribed grade standards of achievement are being replaced with appropriate pupil grouping in the continuous progress program with instruction based upon readiness to learn.

- 6 Traditional assignments are being replaced by the discovery, arousal and utilization of pupil purposes.

- 7 The study recitation procedure is being replaced with a true "working period," the activities of which are determined by pupil participation in planning what to do as well as how to do it.

- 8 Variety of materials and approaches to the solution of the same problem are needed to provide for individual differences among pupils.

- 9 Increasingly, the immediate outcomes of classroom activities are being stated in terms of personality attributes.

- 10 The proof of learning is in pupil behavior, as measured by objective tests supplemented by observational records and reports.

11 Evaluation is a part of instruction

12 The crucial teaching function is being interpreted as that of guidance, stimulation, and the encouragement of the learner in his own processes of selecting purposes, organizing means, and evaluating outcomes.

13 The continuous progress program is being based upon a wide and intensive knowledge of individual pupil abilities and environmental conditions

14 The chief characteristic of current instructional practices is that they are tentative, emergent, and experimental

15 Increasing emphasis is being placed upon the development of positive mental hygiene and of emotional balance and tranquility, through interacting guidance and instructional programs

16 The most conspicuous departure in modern instructional practices is the stimulation of creativity in the sense of creating something new, as distinguished from rediscovering meanings and relationships ¹

Even a casual consideration of the foregoing list of trends should make it apparent that classroom activities cannot be predetermined for the teacher and that perhaps the most essential part of the teacher's work is planning an effective instructional program that is clearly adapted to social and pupil needs. Based upon an adequate consideration of individual and societal needs, teacher planning must follow three essential steps: (1) that of formulating suitable attainable goals or objectives, (2) that of selecting appropriate materials and activities, and (3) that of developing and using effective appraisal instruments.

FORMULATING OBJECTIVES

The two essential ultimates of education, the development of personality and institutional progress, must be considered points of reference or criteria for the selection of all intermediate and immediate objectives. This means that the objectives of education must first be translated into teacher purposes and that there must be achieved an identity between teacher purposes and pupil purposes. The reinterpretation of educational objectives in terms of teacher purposes that are or may be made acceptable as pupil purposes becomes the first and most important step in teacher planning. The implications of this approach to instructional planning are

¹ Adapted from BURTON, WILLIAM H., *A Summary and Implications of Newer Trends* in 'Newer Instructional Practices of Promise' *Twelfth Year book* pp 1-21 National Education Association Department of Supervisors and Directors of Instruction, Washington D C, 1939

many In the first place, it is implied that teachers are familiar with the current social scene, that they are aware of social imperfections and needs, and that they are familiar with democratic procedures through which remedial or developmental steps may be taken. Some of the factors related to social or institutional progress are suggested in Chap IV. In the second place, there is the implication that teachers are intimately familiar with the 150 or more pupils who are assigned to their respective classes. Such a familiarity is presumed to include a broad knowledge of the pupils themselves in relation to the varied background factors that are influential in the total learning situation. Such factors are discussed in more detail in Chaps II, III, and V. There is implied further a willingness on the part of teachers to formulate objectives for their courses in terms of personality attributes that may be developed through pupil experiences.

The inability or the unwillingness of many teachers to accept the challenge of this newer point of view in education is perhaps one of the most prominent sources of confusion in education today. Adherence to the traditional emphasis upon subject-matter mastery in patterns that are logically comprehensive and academically approved conflict with present efforts to reorganize the secondary-school curriculum so that it will meet the needs of pupils and of society. The crucial distinction between the two points of view is to be found in the acceptance of objectives to be attained. The most important traditional goal of education was the acquisition of subject matter. Without minimizing the importance of subject matter, current interpretations consider subject materials as means rather than as ends in themselves. Under an educational philosophy that interprets subject-matter mastery as the most important educational goal there is neither need nor justification for the junior high school as a separate division of education. Under the modern approach, the junior high school program of studies should be reorganized and expanded so as to provide more adequately the kind of experiences that will result in the development of pupil personalities and hence in social progress.

Personality Goals—When the objectives of general education, and particularly the objectives of junior high-school education, serve as the guiding principles for the formulation of immediate objectives for specific courses of study, these may be stated in terms of personality attributes that logically lead to the ultimate objectives of education.

A note of caution, however, should be introduced into this seemingly simple task of planning. The development of personality is a procedure that is not clearly understood, even by experts, and such experimental evidence as is available on the development of personality suggests that logical subject-matter relationships are inadequate bases for the organization of a program directed to this end. That is, much experimental evidence is needed before teachers are justified in assuming that specific selected subject materials will actually lead to the development of desired personality traits, including various attitudes, understandings, and appreciations. A relevant historical example is to be found in the formerly widespread belief that certain of the more difficult school subjects, such as mathematics and Latin, were particularly efficacious in developing the reasoning powers and the intellect generally. Because of the nature of these subjects and because of the difficulties that pupils experienced in mastering them, it seemed logical to suppose that they would contribute highly to the development of general intellectual ability. However, after crucial experimental evidence had been produced refuting this assumption, mental discipline could no longer be stated as a residual outcome that is intrinsic in the subjects themselves.

An analysis of the personality objectives currently claimed for many traditional subject fields suggests that these have been formulated on the basis of logic, often with too little reference to available experimental data. Teachers should be particularly critical of claims that are advanced for certain subject fields, especially those relating to the development of moral and ethical character traits, of esthetic understandings and appreciations, and of qualities of citizenship and social responsibility. The emphasis that the modern curriculum movement places upon subject materials as means raises anew the old problem of the transfer of training for, apart from the immediate or remote usefulness of subject materials to pupils, their contribution to instruction must lie in their transfer values. Considerable care must therefore be exercised in formulating objectives in terms of personality attributes when such values are assumed to arise from the intrinsic nature of the materials rather than from direct functional applications. In the selection of objectives, teachers should use such experimental evidence as may be available and should critically and logically analyze proposed materials and activities from the point of view of their probable contribution to such objectives.

Interrelationships — Another general factor that needs to be considered in the selection of objectives is the relationship that necessarily exists among various units and courses. The sequence of units and of courses in a curriculum should be so planned that pupil experiences that are gained in one unit will lead to the next in a series of steps toward the general objectives of education. Thus, however, is a somewhat ideal condition, seldom found in regular classroom procedures. Several units or pupil experiences may contribute to the same educational objectives, and although a certain objective may be considered largely within the particular province of one unit, course, or subject, modern emphasis is upon the interrelation of courses and the overlapping of objectives. Thus, for example, a junior high school may offer a specific unit on safety education, which is required of all pupils, but teachers in other courses must share the responsibility for teaching safety in related fields. Special courses in physical education, industrial arts, and general science are particularly responsible for developing the knowledge and attitudes that are needed for the safety of pupils. Similarly, throughout the entire program of studies, many units and many courses may contribute to the same educational objectives. Such interrelationships between units and courses emphasize the importance to teachers of knowing the previous and present experiences of pupils in other courses and of making appropriate recognition of these relationships in determining the objectives of a new unit or course.

Differentiated Objectives — The individual differences among pupils are so great and so varied that differentiated objectives must be formulated for individual pupils and for small groups of pupils within the larger class. No school wide plan of homogeneous grouping can classify pupils so finely that each class group will have the same or nearly the same individual developmental needs, and hence classroom teachers must formulate differentiated objectives for them. Although this procedure definitely complicates the responsibilities of the individual classroom teacher, it is apparently the only possible way of attempting to provide appropriate experiences for all pupils. It must be remembered that it is the individual pupil who does the learning and not the class group as a whole. When, for any reason 5 or 10 per cent of the pupils in a class are unable to profit from the instruction offered, their time has been wasted, the teacher's time has been wasted, the progress of other pupils has been impeded and the taxpayers' money has been wasted. Simi-

larly, when a small percentage of pupils have been only partially challenged through the classroom situations provided, their failure to develop in proportion to their abilities is a direct responsibility of the teachers

After tentative goals have been selected, it is often desirable to administer a pretest or a series of pretests to the class as a whole in order to discover more specifically the status of pupils with respect to the objectives under consideration. Frequently the results of such pretests suggest a need for further modifying the objectives so that these may more nearly represent suitable or attainable pupil goals.

SELECTING MATERIALS AND ACTIVITIES

A second aspect of the planning that is required of teachers who are engaged in directing the learning experiences of pupils involves a consideration of the mediums of such learning experiences. Teachers must assume the major responsibility for planning, selecting, and organizing the subject content as well as the teaching procedures and the activities in which pupils are to engage. Such planning must take into account certain limitations, restrictions, and responsibilities as may be operative in the local school situation.

Limitations—Practical limitations of time and space, equipment, and of materials available necessarily influence the nature of the plans for specific courses. Such limitations need not prove a serious obstacle to providing desirable experiences, but they must be recognized as limitations that challenge the initiative and the resourcefulness of the teacher. Thus the time that is allotted for a given unit of work may appear inadequate for a given group of pupils, but often through the proper use of more effective techniques and aids to instruction, the planned objectives may be realized in the time allotted. It is seldom possible for teachers to have all the space needed for pupil activities, but under the inspiration of a creative teacher, improvised arrangements may more than compensate for the lack of supposedly ideal space conditions. Again it must be emphasized that it is pupil experiences and pupil growth with which teachers are primarily concerned. On the average, the pupils themselves will not experience ideal conditions outside the classroom, and the development of pupil initiative and resourcefulness as a by-product of some more central objective may prove as worthwhile as the original goal. Limitations of space, equipment, and materials seriously handicap the realization of certain goals,

teacher knows even the names of pupils who are to be enrolled in his courses, but the major adaptations of the course to individual pupil needs must be made after class rolls are available. As soon as class enrollments are known, the teacher should study carefully the records contained in the cumulative folder for each pupil and should attempt to systematize and interpret these data in terms of developmental needs that may be met through the specific subject or field that is assigned to the teacher. When the data of the cumulative folder are inadequate, teachers may supplement them through the use of the most suitable means of collecting the kind of data needed. Selected methods of collecting pupil data are discussed in Chap. V. Some of the factors about pupils that affect teacher planning include a knowledge of special interests and achievements, hobbies, health, home conditions and relationships, physical and sensory handicaps, records of accomplishments in previous courses, and, in short, all the data of the complete cumulative record that are found to have a direct influence upon the experiences planned for each individual pupil. Not only should these data determine the nature of the experiences planned but they should provide the cues that point toward effective motivational devices and other suitable classroom procedures. It is relatively immaterial what subject matter teachers think pupils ought to learn or ought to know, when this is determined apart from a knowledge of the individual pupils themselves. Perhaps the greatest weakness that may be observed in teacher plans is to be found in the failure to take into consideration the developmental status and the personal and social experiential needs of pupils.

Multiple Objectives and Differentiated Plans—The foregoing discussion should make it clear that teacher purposes cannot be the same for all pupils and that no one objective can be adequate for all the work of a given unit or course of study, even for a single pupil. It should be obvious, too, that multiple objectives and differentiated objectives require differentiated plans and the organization of differentiated units, materials, and activities.

In general, current provisions for meeting individual differences tend to follow three complementary plans. Special classes are being provided for the extreme deviates, the so-called "exceptional" children. A more detailed discussion of provisions for exceptional children is given in Chap. VI. The second general provision for meeting individual differences is that of classifying pupils into relatively homogeneous groups in accordance with their present



Junior high-school girls become adept in the use of modern laundry devices (Photograph courtesy of public schools San Jose Calif)



Many forms of art provide opportunities for self expression (Photograph courtesy of public schools San Jose Calif)

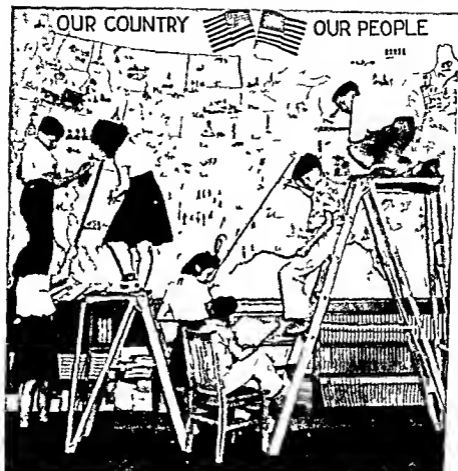


Learning takes many forms (Photograph courtesy of public schools San Jose Calif)



Household arts are interesting (Photograph courtesy of public schools San Jose Calif)

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Studying our country and our people (Photograph courtesy of public schools San Jose Calif)

status and educational needs, on the basis of some such criteria as suggested in Chap V. The administrative classification of pupils so as to reduce the extreme heterogeneity found in the grades of the junior high school cannot create truly homogeneous groups. Even when exceptional children are cared for in special classes and when relatively homogeneous groups are formed, there is obvious need for the third provision for meeting individual differences through differentiated instruction in regular classes.

Because of the very nature of the problem of planning classroom instruction, no specific set of rules can be laid down. The major aspects of both the planning and the teaching are necessarily an expression of the creativeness, the ingenuity, and the resourcefulness of the classroom teacher. In general, however, after the objectives have been formulated, the next step is to select specific subject materials for the units that are to be used and at the same time to determine suitable teaching procedures and pupil activities. Choosing the subject materials involves a determination of what is to be learned, from the point of view first of the "minimum essentials" for all pupils in the class. This means a careful selection of the facts, principles, vocabulary, dates, names, places, processes, mechanisms, structures, forms, attitudes, understandings, and appreciations as these or other aspects of the situation are related to some life problem that serves to unify the unit of work. The second point of view in choosing what is to be learned involves a consideration of differentiated objectives and the selection of corresponding materials and procedures. The differentiated units thus formed may be divided into daily lesson plans to centralize attention upon a specific experience or aspect of the unit. On the whole, daily lesson plans tend to be more effective when they are developed the day before they are needed.

From the functional point of view, the logical organization and sequence of subject materials, as these are so commonly presented in traditional textbooks, should be reorganized in accordance with the needs of pupils, and then such materials should be used only insofar as they contribute to needed pupil experiences. It must be recognized that there are many ways of creating experiential situations. Many valuable experiences may be had directly, such as social experiences, manipulative experiences and various others that may result from participation in school activities or in community activities. Other valuable experiences may be had vicariously through motion pictures, the radio, or through special exhibits.

Reading and studying printed materials is a necessary form of acquiring experiences but it is not the only means that may be used for learning. Variety in the use of materials and activities adds zest and meaning to the learning situation.

The materials for a unit should not be considered apart from the associated activities of the class. When the objectives include the development of attitudes and appreciations, for example, the actual subject materials being studied may contribute less than the attitudes and appreciations of teacher and pupils, if appropriate provisions are made for the expression of such attitudes and appreciations in the total classroom situation. Similarly, when the objectives include the development of study habits and skills, the nature of the activities in which pupils learn and appreciate such habits and skills often prove to be the crucial factors, rather than the memorization of underlying precepts.

Types of Plans—Out of all the available instructional plans that may be used in a given class, the teacher must determine the ones that are most suitable for the particular needs of each class. When either the instructional unit or the experiential unit is used as a basis for selecting materials and activities of the class, consideration should be given to the form in which units are administered and to the frequency with which they are used throughout the semester. Several types of plans are suitable for unit assignments. Prominent among these are the Dalton and the Winnetka plans and innumerable variations of the problem, project, or contract plans. For greatest effectiveness the Dalton and the Winnetka plans should be adopted throughout the entire school. This, of course, is a condition over which the teacher has no control. Variations of the problem, project, and contract plans may be adopted by individual classroom teachers even when they are not used systematically by other teachers. In general all the procedures that are characterized by the unit assignment are intended to provide for individual pupil growth through self-directed activities under the guidance of the teacher. More specific purposes that may be realized through these procedures include the following:

- 1 To assure the mastery of minimum essentials by all pupils
- 2 To develop the ability to recognize problematic situations
- 3 To develop an understanding and use of steps in problem solving
- 4 To motivate learning through practical classroom activities
- 5 To develop self-reliance, responsibility, and initiative by pupils
- 6 To provide opportunities for creative self-expression
- 7 To promote an appreciation of the value of cooperative group enterprise

Sometimes inexperienced teachers make inappropriate and unsuccessful applications of these techniques to their classrooms. It should be remembered that contract plans calling for the mastery of so-called "minimum essentials" for all pupils create an exceedingly difficult practical problem of definition when the individual differences of pupils are taken into consideration. Too frequently contract plans provide only for time variations in the completion of contracts and fail to provide differentiated assignments in accordance with the needs of pupils. In considering the long time planning for the semester, the mistake is frequently made of attempting to cast all instructional materials into problem form. Not uncommonly, too, little attention is given to the sequence of unit experiences especially when comparatively unrelated problems are grouped together. In their overenthusiasm for the problem method teachers are sometimes guilty of making problems unnecessarily difficult, of confusing activity with meaningful learning and of allowing pupils to base conclusions upon insufficient data or upon faulty reasoning. In the use of the problem method, it is highly important that teachers assign or assist pupils in selecting only those problems upon which it is possible to secure adequate data that are of such a nature that they may be readily interpreted by pupils in their present level of maturity. In the evaluation of pupil progress it is likewise important that appropriate weight be given to project activities as only one aspect of development. These considerations should in no way be interpreted as invalidating the general value of plans of this type, rather, they should emphasize the importance of carefully choosing plans that are appropriate and suitable to the needs of the particular classroom situation.

It has already been pointed out that when problem or project methods are used, teachers should be responsible for guiding pupils in the selection of suitable projects. An effective means for guidance of this kind is through cooperative teacher pupil planning. Such a joint enterprise encourages the establishment of an identity between teacher purposes and pupil purposes and encourages the selection of problems or projects that are timely, interesting, challenging, feasible, and of evident worth. Struck¹ lists the foregoing characteristics as criteria for project selection.

Planning for the use of problem or contract methods involves a concise statement of the scope and limitations of each unit, a clear

¹ STRUCK, F. THEODORE *Creative Teaching* p. 317, John Wiley & Sons Inc., New York, 1938.

statement of objectives or purposes, a study of the materials needed together with their sources and availability, and a careful consideration of the relation of the project to the total work of the course. The success of these methods depends in large measure upon the enthusiastic acceptance of the problem or project by pupils, upon pupil understanding and acceptance of the purposes that are to be accomplished, and upon the guidance that is given by teachers (1) in collecting, recalling, and applying data relevant to the solution of the problem, (2) in formulating defensible conclusions which are subject to verification, and (3) in pointing out the implications and relationships of the conclusions.

Types of Procedures—In order to plan the work of a class effectively, teachers need to be familiar with the advantages, weaknesses, and most appropriate applications of all teaching procedures and techniques. In every field of human relations, there have been developed effective or artful devices and procedures that encourage the realization of desired results and serve as controls over personal conduct and social intercourse. Salesmen learn how to approach customers, how and when to talk, and when to take an order. Attorneys develop successful court room mannerisms and procedures that in large measure contribute to their success. The experienced hostess knows just the right thing to say at the right time to make her guests feel at ease and comfortable.

Leading and guiding the activities of pupils in classrooms in like manner require the use of a wide variety of artful devices and procedures. These are intended to create wholesome working relationships among pupils and between pupils and the teacher, and they are intended to stimulate pupil interest and, in general, to promote the effectiveness of the total teaching situation. There are times when the teacher must use the lecture method to interpret obscure materials through some appropriate example or experience, to give information not readily available to pupils, to supplement contributions by pupils, to arouse interest, to introduce new topics, or to summarize the work of a unit. Sometimes the lecture method should be used in connection with demonstrations or with visual presentations through objective aids, such as motion pictures, models, exhibits, and the like. Conditions may also arise when old-fashioned drills are needed to fix necessary knowledge, to establish learning habits and to perfect necessary skills. The progress of the class may require directed study to enable teachers to give certain pupils more individual guidance. Methods of questioning and making assignments are procedures that require careful planning.

Closely related to all specific teaching procedures is an extensive and appropriate use of objective aids and other teaching aids such as work books, hand books, and special equipment. Careful consideration must likewise be given to the so-called "motivational" techniques. The manner in which previews are presented often determines the success or failure of an entire unit of work. New interests must be aroused through whatever devices are needed. Pupils are most interested in areas in which they have the greatest amount of information or in those in which they have had the most vital experiences. In presenting new materials, it thus becomes a very essential function of the teacher to create satisfying initial experiences and to present a sufficient amount of information to arouse curiosity and new interests. In this procedure, the use of dramatic incidents in the classroom often proves effective. The most basic motivational devices, however, appeal to existing interests and to the personal wants and needs of pupils. When instructional materials have been properly selected, they bear a direct relation to the basic wants of pupils. It is the teacher's function in planning to discover effective ways of pointing out the relationships and applications of selected subject materials so that pupils will understand how these may be used to further the realization of their own felt needs and purposes. All classroom learning should be meaningful, and insofar as is possible it should possess an immediate functional value. When functional values are delayed, as in the case of certain college-preparatory subjects, teachers should take particular care to point out or interpret reasons for their present study.

An important series of socialized classroom procedures that is being widely used in junior high schools may be grouped together under the heading "discussion procedures." The more commonly used types include the symposium, the forum, the round table, the conference, the panel, and the debate. All these procedures have many elements in common, but each has a distinct contribution to make for certain classroom situations. Effective planning implies that teachers are familiar with the advantages of each procedure and with the specific purposes that may best be served through its use. Some of the more important purposes that are served through all these socialized-discussion procedures include the following: (1) to promote pupil interests and participation in classroom activities, (2) to exchange information and ideas after reading, studying and experiencing in relevant areas, (3) to plan unit assignments and group activities, (4) to analyze and synthesize conflicting points of view, (5) to clarify applications of facts and principles, (6) to

promote the ability of pupils to carry on interesting and intelligent conversations and discussions of important topics, (7) to promote fair mindedness and respect for the opinion of others, and (8) to develop the ability to use and to appreciate democratic procedures

Inexperienced teachers sometimes fail to secure the best results with various discussion methods, because they are unfamiliar with the special techniques of conducting panels, forums, and round-table discussions, and hence they fail to guard against certain situations that should be avoided. Unless socialized discussions are carefully planned and conducted, frequent digressions are likely to ensue and lead to confusion. Because of the differences among pupils, both in knowledge and in willingness to enter into discussions, certain pupils are likely to dominate the situation. Because of the informality of these procedures, teachers too often fail to assure the previous preparation of pupils for participation, and the discussions thus tend to become boring and perfunctory. Highly desirable outcomes may be ensured, however, when pupils understand the reasons for the discussions, when they have been given ample opportunity to acquire factual backgrounds, when all pupils not only are given an opportunity but are encouraged to participate, and when there is an adequate summarization of the discussion.

The varied aspects of planning that have been mentioned in the preceding discussion of materials and activities should serve principally to emphasize certain areas in which intensive and systematic teacher preparation is needed. Many successful teachers find it highly profitable to maintain a personal file or a collection of source materials and of teaching procedures with a systematic notation of the classroom conditions under which these have proved most effective. Such files of materials and procedures prove an invaluable aid in planning instructional programs. Beginning teachers and teachers in training might well begin the organization and development of their own files of materials and procedures.

DEVELOPING APPRAISALS

Another part of instructional planning is that of determining appropriate appraisal techniques. There are two essential aspects of appraisal that must be recognized in planning. The first has to do with the appraisal of pupil progress toward selected objectives. This is, of course, at the heart of all instructional planning. Various techniques of measuring and evaluating pupil progress are discussed in Chap. XII. It should be emphasized here, however, that the means that are used in appraising pupil progress should be deter-

mined at the time the basic plans for the unit or course of study are made. Not infrequently, careless or inefficient teachers wait until the time arrives for periodic reports on pupil progress before planning examinations or appraisal devices. Although hurriedly constructed tests and appraisals purport to yield satisfactory evidence of pupil growth, too often they are only partially reliable measures of subject achievement alone. Superior teachers find it highly desirable to plan and to develop methods of appraisal along with the construction of unit outlines. When changes are made in objectives, materials, or activities, it is, of course, necessary to make corresponding changes in evaluation instruments.

The second aspect of determining methods of appraisal involves the evaluation of the instructional plan itself. In general, the effectiveness of classroom procedures and activities may be judged by the progress of pupils. Educational science demands more analytical, objective evidence of the value of specific activities that lead to desired educational objectives. Educational progress depends in large measure upon the cumulative contributions that are made by teachers from careful evaluations of plans that have been used under varying classroom conditions. Furthermore, an essential part of the professional growth of teachers is dependent upon continuous critical self-appraisals of their classroom procedures. Determining criteria for the evaluation of units or other types of instructional plans thus becomes an essential part of planning.

When a systematic plan for observing and recording classroom activities is used, such records contribute to an easy summarization and interpretation of the value of the total procedures upon the completion of the unit. The ideal evaluations of teacher plans would be through a carefully controlled experimental situation that would yield reliable data with respect to the effectiveness of the total classroom procedure as a means of furthering pupil progress toward the objectives of the class. Obviously this is not always possible under the practical conditions that must be met in most junior high schools. Nevertheless, through careful and adequate planning, teachers can improve themselves professionally, increase the effectiveness of their classroom work, and collect reports and evaluations on classroom procedures and activities that may prove highly valuable to other teachers through cooperative planning.

SUMMARY

Trends in the reorganization of secondary education and particularly in the development of newer instructional practices place

increasing importance upon the responsibility of the teacher in planning the work of his courses. In general, there are three principal phases of teacher planning: formulating objectives, selecting materials and activities, and developing appraisal devices. For the purposes of analysis these aspects of planning may be considered separately, but it must be remembered that the final result must be a unified plan embodying all three aspects.

In formulating objectives, the starting point should be with the general objectives of education, and the result should be a reinterpretation of these objectives in terms of appropriate and suitable purposes that may become accepted pupil goals. Various factors need to be taken into consideration in formulating specific objectives of units or courses. Noteworthy are the reasonableness of personality goals that are selected, the interrelationships that exist among units, courses and extraclass activities, and the nature and extent of individual differences among pupils which demand differentiated objectives.

In selecting materials and activities the essential criterion should be their relevancy as means for achieving objectives. Certain limitations, restrictions and responsibilities that exist in the local school situation or that are embedded in the psychology of learning influence the teacher's individual freedom in selecting materials and activities. Since objectives will have been formulated in accordance with the needs of individual pupils it follows that differentiated planning is required to provide suitable means for realizing differentiated objectives. Careful consideration must be given to the selection of suitable types of plans and types of procedures that will create classroom situations that in themselves tend to engender the desired pupil experiences.

Two aspects of planning are required in determining suitable appraisal devices. The first involves the measurement of pupil progress; the second involves the evaluation of the teacher's instructional planning. Carefully planned and skillfully executed classroom procedures should result in many values for pupils and for teachers. The successful teacher knows that to fail to plan is to plan to fail.

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Development—*Extraclass activities should be evolved in accordance with the educational interests and needs of pupils and should contribute to the regular instructional program* Insofar as the interests and needs of pupils are met through regular classes, there is little reason for developing supplementary extraclass activities for them However, whenever there are interests and needs that are not being met through the regular instructional program, extraclass activities may be developed, providing that there are a sufficient number of pupils who need the specific experiences of the activities and who can be interested in them

Because of the variable conditions that exist in each junior high school, there can be no formal determination of either the number or the kind of extraclass activities that should be developed in a particular school situation An activities program that is successful and adequate for one school may prove totally inadequate or unsuitable for another The interests and needs of pupils must be carefully studied and interpreted in relation to the regular program and general local conditions Each activity that is selected and developed must serve a specific purpose, although some activities may serve several general purposes as well Thus the specific purpose of the student council is to provide for pupil participation in the administration of the school, but all the purposes suggested for extraclass activities may be served to some degree through the council

Frequently successful extraclass activities develop through interests aroused in regular classes Thus, for example, wild flower Audubon, first-aid, dramatic, swimming, stamp clubs, and various departmental clubs have developed from interest created in regular classes Often, too, successful extraclass activities are patterned after popular adult activities and hobbies Thus interest in publication clubs, aviation, boating, social dancing and other similar activities may grow out of community activities

Extraclass activities evolved in accordance with pupil interests and needs should enrich and supplement the regular instructional program, they should widen pupil interests and contribute to the development of social and emotional stability and maturity, and they should provide extensive opportunities for developing qualities necessary for democratic cooperation and leadership

Administration.—*Extraclass activities should be administered as an integral part of the total program* When extraclass activities are administered as a part of the total program, a closer interrelation-

ship of all activities can be achieved, and there is thus provided a stronger foundation for the realization of desirable educational objectives

Administering extraclass activities as a part of the total program implies that they are to be scheduled as a part of the regular school day. When all extraclass activities are scheduled for some special period of the day, pupils from all grade levels may take part in them without interrupting regular classes, the activities themselves attain a status of greater dignity and importance, a wider pupil participation is secured, and faculty sponsors accept their responsibilities wholeheartedly as a regular part of their teaching role.

If extraclass activities are to provide worth while educational experiences, they must be sponsored and directed by an interested member of the faculty. Faculty supervision of extraclass activities is just as important as the supervision of regular instructional classes. The sponsorship and direction of extraclass activities entail much work on the part of faculty members and such responsibilities should not be added to an already heavy teaching load. The time that is required of teachers for this important work should be scheduled as a part of their teaching day.

Participation—*Extraclass activities should be participated in by all pupils on the basis of their particular interests and needs.* Certain extraclass activities, such as the assembly and the homeroom, are required of all pupils. Certain other activities require special talents or special abilities. Membership, for example, in publication clubs and in certain departmental clubs should be restricted to pupils who show evidence of ability to contribute as well as to profit from such activities. Membership in activities such as the student council and the student court usually is determined through a student-body election.

For the most part, however, membership in activity clubs should be elective on the part of the pupils themselves. In considering this principle, it is important to distinguish between pupil interests and pupil needs. Pupils who are reticent about expressing interests or joining in activities or those who have a paucity of interests often need the benefits of extraclass activities more than pupils with varied interests and strong initiative. In a properly organized activities program the regular counseling staff of the school provides guidance in the choice of suitable extraclass activities. On the basis of such guidance which of course, should be carried on in cooperation with parents, pupils should be scheduled for at least one activity

which they should not be allowed to drop without the consent of the counselor and parent. Thus pupil participation in extraclass activities is placed on the same basis as their participation in most elective regular class activities, that is, on the basis of interest, need, and ability to profit from the activity. By scheduling pupils for at least one extraclass activity, the school provides a systematic plan for broadening and expanding the interests and experiences of all pupils.

Financial Support.—*Extraclass activities should be financed in a judicious and businesslike manner.* The problem of financing extraclass activities has evoked varied procedures in different communities. Although in many communities they are regarded as an integral part of the total program, are scheduled on school time, and are sponsored by the faculty as a part of their teaching load, few communities finance their extraclass activities entirely from school funds, as other activities are financed. To be sure, the practice of scheduling these activities as a part of the total program, of assigning teacher sponsors, of providing room space, equipment, and certain materials not only implies a recognition of the essential educational values of extraclass activities but provides the basic financial support for their operation. Over and above these factors, in most schools the activities program must be largely self-supporting. This support comes from various sources, such as contributions paid advertising, fees from pupils, and admission charges to programs provided by the activities. Regardless of the method of acquiring financial support, however, funds should be allotted to the various activities on a fair and judicious basis in accordance with needs, and all funds should be handled by means of sound, businesslike procedures.

SUITABLE ACTIVITIES

The extraclass activities programs of junior high schools include many activities of different types. Classifications of the extraclass activities of secondary schools have been made by various authorities, prominent among whom are Millard,¹ Koos,² and Terry.³

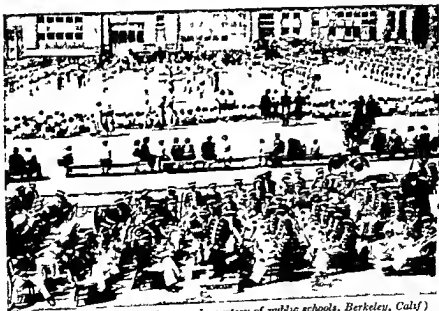
¹ MILLARD, CECIL V., *The Organization and Administration of Extracurricular Activities* p. 8 A. S. Barnes & Co., New York, 1930.

² KOOS, LEONARD V., "Analysis of the General Literature on Extracurricular Activities," *The National Society for the Study of Education, Twenty fifth Year-book* Part II, pp. 19-20, Public School Publishing Company, Bloomington, Ill., 1926.

³ TERRY, PAUL W., *Supervising Extracurricular Activities*, p. 147, McGraw-Hill Book Company, Inc., New York, 1930.



Home-making pageant "Queen of the May" (Photograph courtesy of public schools, San Jose, Calif)



Field Day activities (Photograph courtesy of public schools, Berkeley, Calif)



Embryo naturalists contemplate the turtle—or is it the other way around (Photograph courtesy of public schools San Jose Calif)



Children enjoy a whirl while activities (Photograph courtesy of public schools Berkeley Calif)

Reavis and Van Dyke divide extraclass activities into seven categories as follows:

- Group I. Student government, school service, and honorary organizations
- Group II. Social, moral, leadership, and guidance clubs
- Group III. Departmental clubs
- Group IV. Publication and journalistic organizations
- Group V. Dramatic clubs, literary societies, and forensic activities
- Group VI. Musical organizations
- Group VII. Special-interest clubs¹

Under these seven groups, Reavis and Van Dyke present an extensive list of activities that are suitable for junior high schools. Such classifications and lists are valuable in that they suggest activities that may be suitable for a particular school, providing that they are evolved and adapted to the local situation by pupils and faculty.

The following list includes most of the extraclass activities that are commonly found acceptable to junior-high-school pupils

LIST OF EXTRACLASST ACTIVITIES FOR JUNIOR HIGH SCHOOLS

- I Homeroom activities
- II Assembly programs
- III Graduation exercises
- IV Organizations for pupil participation in school administration
 - 1 Council
 - 2 Court
 - 3 Traffic organizations
 - a On grounds and in building
 - b On streets and public thoroughfares
- V Publication clubs
 - 1 Pupil handbooks
 - 2 Newspaper
 - 3 Semiannual

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 - Editorial club
 - Art club
 - Business-management club
 - Photography club
 - Typing club
 - Mimeographing or printing club
- VI School service clubs
 - 1 Clerical
 - 2 Cafeteria
 - 3 Objective aids
 - 4 Stagecraft
 - 5 Assembly

¹ REAVIS, WILLIAM C., and VAN DYKE, GEORGE E., "Nonathletic Extracurriculum Activities," *Bulletin*, 1932, No. 17, *National Survey of Secondary Education Monograph* 26 pp 78-79, U S Office of Education, 1933

VII Character building clubs

- 1 Junior Hi Y
- 2 Boy scouts
- 3 Girl scouts
- 4 Camp-fire girls
- 5 Girl reserves

VIII Departmental clubs

- 1 Music
 - a. Band
 - b Orchestra (regular)
 - c Dance orchestra (swing band)
 - d Chorus choir, glee club
 - e Instrumental and vocal ensembles
- 2 Physical education
 - a Seasonal games
 - b Hiking
 - c Dancing
 - d Bicycling
 - e Swimming
 - f First aid
 - g Leaders
 - h. Archery
 - i Boating
 - j Boxing
- 3 Science
 - a Audubon
 - b Chemical
 - c. Wild flowers
 - d Photography
 - e Astronomy
 - f Radio
- 4 Foreign language
- 5 English
 - a Dramatic
 - b Public speaking
 - c Writing
 - d Reading
- 6 History
 - a Stamp
 - b Museum
- 7 Industrial and household arts
 - a Model airplane
 - b Woodwork
 - c Cooking
 - d Sewing

This list is not intended to be all inclusive, nor is it expected that any junior high school will have all these activities in operation at

any one time. The principles that have been suggested for the organization of an activities program should be used to select activities that are sufficient in number and broad enough in scope to provide each pupil with an opportunity to serve the school, to participate in its administration, and to further his social development and his special interests.

The extraclass activities program should be evolving, functional, and dynamic. Since pupil populations and pupil interests change continuously, the types of activities and the procedures used in conducting them must likewise change.

The Homeroom —Originally, the homeroom was organized primarily to provide a place to take attendance, to keep records, to distribute report cards and books, to make pupils' schedules, and to give administrative instructions to pupils. In addition to the function of caring for administrative routine, the homeroom serves other worth-while purposes today. It was pointed out in Chap. V that in many schools the homeroom is the center of the guidance program. This is undoubtedly its most important function in the modern junior high school. However, another important function of the homeroom is that of providing a basis for all student-body organizations. Thus the homeroom group often serves as a unit for pupil participation in the administration of the school. Through the homeroom, pupils learn how to organize into working groups, to elect officers, and to delegate authority and responsibility. Furthermore, by working together cooperatively on school projects and problems such as pupil publications, assembly programs, and safety, pupils learn to study and solve their problems and to manage school affairs. In like manner, the homeroom provides a convenient base for discussing and promoting the work of the student council and the student court.

The Assembly —As an extraclass activity, the junior high school assembly provides many educational values. When its programs are effectively planned, the assembly serves as a strong integrating medium for the entire instructional program. Pageantry in which all departments of the school participate may be an outgrowth of regular classwork brought together as a unified program through the assembly. A regular class or an extraclass group may occasionally provide a program such as a fashion show, a one-act play, a dancing music, or science demonstration or a panel discussion on a question of general interest. Such assembly programs not only furnish valuable educational experience to the participants and

entertainment to the audience but also provide a means of interesting all pupils in various aspects of the instructional program

The assembly may have its greatest value when it is considered an activity of the pupils and for the pupils. In such assemblies, pupils preside, share in planning the programs, and often present the programs themselves. Pupil committees may see that the stage is attractively prepared and the program efficiently managed. Other committees direct the orderly passing of pupils to and from the auditorium, assist in the seating arrangement, supervise pupil conduct in the assembly, and extend courtesies to visitors and participants. Thus the pupils acquire an attitude of pride in their assemblies through doing their full share in making them worthwhile. Bringing all the pupils together for assemblies that are planned and managed in this way builds school morale by making each pupil feel that he is a part of a cooperative organization working for the good of all. In large junior high schools, pupils are more effectively served through a greater number of special interest assembly programs for small groups of pupils, with only occasional general assemblies.

Pupils need guidance and instruction for effective participation in the planning and administration of assembly programs. It is, of course, desirable to keep programs on the highest possible level of excellence. Maintaining high standards means that presiding officers and other pupil participants must be trained for their specific duties and responsibilities. Furthermore, the greatest benefits to pupils grow out of leadership and service training given by the faculty for pupil activities that are interesting and challenging to pupils.

Assembly programs afford an unusually fine opportunity for developing audience courtesy. There appears to be a widespread need for the development of audience courtesy for situations both within and without the school. Audience courtesy means courteous attention to the speaker or to the participants who are presenting the program. Small disturbances, such as talking, shuffling feet, and inattention should be regarded as discourtesies to speakers and to classmates as well. Courtesy attitudes and habits that are thoroughly developed for school assembly programs may readily be extended to theater or public lecture programs outside the school. Exhibiting proper conduct during assembly programs to which the public has been invited is one means by which pupils may interpret their school to the public.

The assembly may serve as the forum of the school for the discussion of school problems. The student council provides an opportunity for the discussion of problems by a group of pupil representatives or delegates, whereas the assembly provides opportunity for the entire student body to discuss or to hear about school problems and activities. Thus, in the assembly, pupil candidates for office may be presented and make their appeal for support, new officers may be introduced and tell of their plans for service, and general activities and policies of the student body and school may be presented and interpreted.

Assemblies should also provide opportunities for bringing before the school outside speakers and performers and for the presentation of school programs to the community. Occasions should not be overlooked to give pupils the experience of seeing and hearing distinguished personalities in various departments of human endeavor. Aside from the cultural, educational, or entertainment value that may result from such assemblies, there is also the value of being host to a distinguished visitor, with the attendant courtesies and considerations involved.

Many assembly programs may be presented to the community throughout the year. In most communities a large number of these assemblies must be held in the evenings so that adults may attend. If the programs of such assemblies are properly planned, they prove to be of high educational value through the experiences provided the participants. Pupils may be encouraged to work on the maximal level of achievement in order to present enjoyable programs to their parents and adult friends. Good conduct, pride in their school, and a workmanlike performance of their responsibilities on the part of pupils in carrying out an assembly of this type will contribute immeasurably to the development of pupils and to a better public understanding and appreciation of the school.

Graduation Exercises—During the past several years there has been a striking change in the nature of the graduation exercises provided in secondary schools. Especially has this change been noticeable among the junior high schools. The traditional type of exercise, including a long address by an outside speaker, stilted and sometimes faculty written salutatory and valedictory orations and the class motto, has largely disappeared. In its place a wide variety of exercises have developed but as yet there is no general agreement as to the best kind of graduation exercises for junior high schools. Some schools believe that little emphasis

should be placed upon graduation exercises in the junior high school. They regard the completion of the junior high-school work as scarcely more important than other grade promotions. In these schools, simple, brief promotional exercises are held during the regular school hours. These exercises are presented largely for the pupils, with little attention to community interest.

In recent years, several large city school systems have been holding city-wide exercises for the graduates of all junior high schools. Such exercises are held in a large central auditorium or in an open air theater. The program usually consists of a brief, appropriate talk by a leading local school official, of orchestral and vocal music, and, frequently, pageantry furnished cooperatively by all the schools. Such exercises are brief, dignified, impressive and have proved popular and successful in many cities. They have the advantage of building a city-wide interest in and appreciation of an entire school system. However, they do not offer as much opportunity for reaching adult members of the community or of interesting community members in their local schools as are offered by the individual-school graduation exercises.

The growing recognition of the importance of interpreting the schools to the public is one factor causing modifications of graduation exercises. In many schools the graduation exercises are used as an opportunity to interpret the schools through demonstrations and exhibits of pupils' work. The programs consist of pageants, dramatics, style shows, demonstrations of regular class activities, such as science, physical education, practical and fine arts, panel discussions on social problems, and demonstrations of extraclass activities, such as the student council or court in action. An excellent discussion and various examples of these programs are presented by Fretwell.¹

Properly planned and directed activity programs of this type that are presented to the public are an essential part of the total school program of all junior high schools, primarily because of the educational experiences that they provide pupils and secondarily because of the interpretive value they possess for adults of the community. Their importance is discussed further in Chap. XVI. Such programs require thorough and painstaking preparation and should be largely an outgrowth of the instructional program. Many schools provide high-quality programs of this type during American Education Week, Public Schools Week, open house, or during

¹ FRETWELL, *op. cit.*, pp. 375ff

evening meetings of parent-teacher organizations. In this way the programs are made an activity and a product of the entire school rather than of the graduating class. The closing days of school are already difficult and complicated and do not appear to some schools as the most appropriate time for large-scale programs of pageantry and demonstrations of schoolwork. Furthermore, the real significance of graduation is often lost sight of in this type of graduation exercise, that is, pageants or demonstrations become the important part of the program, making graduation and the presentation of certificates of promotion in reality an anticlimax.

Many schools believe that the graduation exercises should be brief, simple, dignified, impressive, and beautiful. For these junior high schools, graduation is perhaps the only formal occasion of the year. The entire ceremony centers on the graduating class, and it is planned obviously in their honor. It is their day and the opportunity of the school to honor them for their loyalty and achievement. Parents and friends of the graduates congratulate them and encourage them in the next step of their education. Many parents look forward to graduation day with pride in the achievement of their children. On the other hand, graduation exercises are regarded as an inappropriate time to confer individual awards or to provide for the display of individual talents. The occasion itself is regarded as a symbol of democracy. It is the group as a whole that the school is honoring.

The exercises in these schools include music by the school orchestra, choral singing by the entire graduating class, a flag salute led by a student body officer, a brief address by a capable adult speaker, and the presentation of certificates of promotion by the principal. Often the graduation exercise is the only occasion when the principal presides over programs participated in by pupils. By presiding at these exercises the principal gives a note of official recognition and honor to the class and to the occasion. Care is exercised in the selection of a speaker for an address on an appropriate subject that will appeal to pupils and parents. This type of graduation program has proved popular with both parents and pupils. It is simple, brief, and democratic, and it centers attention upon the real purpose of the exercises, that is, upon the graduation or promotion of the class.

When the many interesting worth while activities associated with graduation are not included in the regular graduation exercises, they may be provided in special assemblies held during the

last day of school and attended largely by pupils and teachers. Such activities frequently include the presentation of awards to members of the class, class plays, and class histories. Some schools have found it desirable to provide time for class social events with dancing and games.

Organizations for Pupil Participation in School Administration. Three types of organizations that provide for pupil participation in school administration are the student council, the student court, and the traffic organizations. These student organizations are discussed in Chap. XIV. There are, of course, other activities that contribute to pupil participation in administration. Foremost among these are the homeroom, the assembly, publication activities, and school service clubs. These are discussed separately, because they have other functions to perform in the extraclass activities program.

Publication Clubs.—There are three types of publications that are practical and valuable extraclass activities in many junior high schools. These are the pupils' handbooks or orientation booklets, the weekly newspaper, and the semiannual. Adverse criticisms have been directed against pupil publications in junior high schools, particularly against the newspaper and the semiannual. Some of these criticisms are justified because of the organization and management of these activities. Some publications are written and managed too largely by principals and teachers, some are produced by commercial printing companies, and some are financed in large measure by business people of the community through advertising that is little more than a gift.

The soliciting of advertising for junior high-school publications is of little value to pupils, and the advertising itself is usually regarded as of little or no value to businessmen. The practice has been condemned by the businessmen of many communities and has resulted in the discontinuance of school annuals in some school systems.¹

In many junior high schools, however, pupil publications have been made effective educational projects that are conducted at a reasonable cost to the pupils and to the taxpayers. This has been done through a small subscription charge to pupils or through the student-body fee, balanced by a charge against school funds for a part of the cost of materials.

In schools where pupil publications have been made successful educational activities, they have been the product of the pupils

¹ *Ibid.* p. 365.

working under the guidance of teachers in the same manner as are all other worth-while educational projects. The editorial work, the art work, the business management, the photography, the typing, and the duplication, either by mimeograph or printing, are carried out by pupils themselves. A large part of the work is done in regular classes, the remainder is done in small informal groups or clubs made up of pupils whose interests and abilities are such that they can do the work well and profit from it. Some schools have found it advisable to organize six separate groups for each of the three types of publications in order to provide sufficient and appropriate activity for a large number of pupils and in order to avoid overactivity on the part of a few pupils. Each editorial group frequently consists of an editor in chief and assistant editors, together with one representative from each homeroom and a teacher of English as a sponsor. The business management is usually handled in the same manner, with a teacher of business practice as sponsor. The art, the typing, the mimeographing or printing and the photography clubs are usually small informal groups without homeroom representatives, sponsored by teachers with interest and ability in these directions. Pupils for these clubs are chosen from the regular classes on the basis of their ability and interest in the particular activity. Although pupil publications should be productions by pupils, nevertheless high editorial quality should be maintained through expert teacher guidance and direction. Under such conditions, pupil publications furnish excellent opportunities for motivating and vitalizing regular instruction through practical and interesting experiences.

School Service Clubs—In the operation of the junior high school, there are many necessary services to be performed that cannot be cared for entirely by the regularly employed personnel of the school.

The performance of some of these services by pupils not only aids the school but furnishes valuable pupil work experience and develops ideals and habits of service to the school and hence to society. Many of these services are performed by individual pupils without the formality of club organizations, in many cases, service clubs are formed for a special type of school service. These clubs should evolve from the needs of the school and therefore they should vary greatly in type and number in different schools. Among the service clubs commonly found in junior high schools are the clerical, cafeteria, objective aids, stagecraft, and assembly

These clubs are usually small, are frequently organized on an informal basis, and include pupils who have special ability and interest in the particular service. Care should be exercised to see that pupils do not spend too much time in such service activities. The work of these services should supplement pupil experiences rather than interfere with regular instructional programs.

The clerical group is usually the largest, since there is often greater need for services of this nature. The office of the principal affords opportunities for pupils to help with filing, mimeographing, receiving and distributing mail, keeping the faculty bulletin board up to date, answering the telephone, escorting guests around the building, and serving as messengers in the building. The attendance office likewise offers experiences of a clerical nature. Pupils may assist with the collection and classification of pupil absentee lists and help the attendance director in checking and compiling attendance data. The usefulness of the school library depends in no small degree upon the performance of many services by pupil groups. Reshelving books, charging out books, mending and numbering books and other materials, keeping magazines and other materials in proper order are among the more common library activities.

In the cafeteria, service groups may assist the cashier, help serve foods, and help operate the lunch stand on the grounds. Frequently these pupils are chosen from among those who need some financial assistance, and some compensation may be provided for their services.

The members of the objective-aids group assist in the care, distribution, and use of objective aids. The stagecraft club assists in operating stage lighting and scenery during theatrical performances. The assembly group helps in preparing and decorating the auditorium, in arranging the assembly seating, and in ushering.

Character-building Clubs—The special character-building clubs suitable for junior high-school pupils include such organizations as Junior Hi Y, boy scouts, girl scouts, camp-fire girls, and girl reserves. Some schools are organizing these groups as a part of their extra-class program, with the clubs meeting at school during the regular day. Although the clubs are under the direction of the school and are sponsored by teachers, the school avails itself of the technically trained personnel of these organizations in the community. When such clubs are active, it is frequently possible to integrate their activities with the character building efforts of teachers in regular

classes and to extend the influence of the school into many aspects of community life

Departmental Clubs—There are many worth-while pupil activities in the junior high school that cannot be furnished in the regular classes but that are closely related to the various subject areas of instruction. These activities represent special interests and hobbies of pupils and frequently grow out of the regular class-work. These activities are provided in most schools through cross-sectional clubs under the various subject departments of the school. Some of the music activities such as band, orchestra, and chorus are in most respects regular class activities but are presented here as extraclass activities because they are cross sectional in nature and are therefore usually scheduled as extraclass activities so that pupils from all grade levels may participate

THE ADMINISTRATION OF EXTRACLASST ACTIVITIES

Efficient methods of administering extraclass activities are just as important for the success of the program as they are for the success of the regular instructional program. After appropriate activities have been selected for a local school situation, there remain two important problems of administration. One is the financing of the program, the other is the direction and coordination of the particular activities themselves.

Financing Extraclass Activities—Although in current practice extraclass activities are widely regarded as an integral part of the total program, complete and adequate support is not usually provided from regular school funds. In many schools the cost for leadership and the basic equipment for most of the activities are furnished from regular school funds, but uniforms, costumes, special equipment and materials, expenses for social events, costs of publications, and many other needs for an enriched extraclass program are provided by funds raised by the student body.

It is likely that most communities will continue to finance extraclass activities, at least in part, from pupil contributions in the form of fees, admission charges, and subscriptions. Indeed, in many schools, extraclass activities are being financed without placing a heavy burden either upon pupils or upon adults of the community. Although the school should provide many superior programs of music, demonstrations, and exhibits of pupils' work without admission charge, many schools believe that there is still an opportunity to present pageantry and other dramatic programs

STATEMENT OF TYPICAL RECEIPTS AND EXPENDITURES FOR EXTRACURRICULAR
ACTIVITIES IN ONE JUNIOR HIGH SCHOOL OF 900 PUPILS*

Activity or source	Receipts from		
	Adults	Pupils	Total
1 Three evening dances, \$0 25 admission	\$ 57 00	\$ 77 25	\$134 25
2 Three afternoon dances, \$0 10 admission (\$0 05 with student-body card)		\$ 34 50	34 50
3 Pageant, two evening performances, average admission, \$0 20	95 00	36 40	131 40
4 Dramatics night, average admission, \$0 20	42 00	13 80	55 80
5 Semiannual \$0 35 with student-body card to those who purchase in advance of publication \$0 50 to others		178 40	178 40
6 Student-body cards, \$0 25		153 50	153 50
7 Sale of soft drinks (evening dances)		28 70	28 70
8 Candy sales and other receipts from miscellaneous sources		19 60	19 60
9 Congress of parents and teachers, contribution for student aid	50 00		50 00
Total	\$244 00	\$542 15	\$786 15

Activity	Expenditures
1 Orchestra for three evening dances (professional dance band)	\$ 48 00
2 Orchestra for three afternoon dances (pupils dance band)	12 00
3 Pageant (costumes and scenery)	51 50
4 Dramatics night (costumes and scenery, 3 one act plays)	23 00
5 Semiannual (lithographing developing and printing, photographs block prints mimeograph ink and paper)	173 50
6 Student labor to apply on student-body cards, admissions, etc	15 25
7 Soft drinks candy at dances	34 65
8 Flowers (auditorium decoration)	8 50
9 Student aid (shoes, glasses, lunches, medicine, street-car tickets etc)	87 50
10 School band (cleaning and replacing uniforms)	59 60
11 Capes for glee club (yardage material)	103 00
12 Relief organizations (material for clothes)	16 00
13 School library (books and magazines)	59 00
14 Stencils and miscellaneous materials	20 50
15 Expenses of various clubs	31 20
Total	\$749 20

* These data are taken from the unpublished records of extracurricular activities in Burbank Junior High School, Berkeley Calif. while one of the authors (L. L. Standley) was principal of this school.

with a small admission charge. Adults of most communities are willing and eager to support such programs when they are of high quality, and a small admission charge more than provides for the expense involved. Many schools find that well-managed evening dances that are chaperoned by teachers and parents not only serve an important social and educational purpose but are a significant source of revenue, even with a small admission charge. Most schools raise part of the funds for extraclass activities through the sale of student-body cards at a nominal fee and through subscriptions to school publications.

An illustrative statement of receipts and expenditures for the extraclass activities of a typical semester in one junior high school of 900 pupils is shown in the summary on page 262.

There are several interesting features about this list of receipts and expenditures. Approximately two-thirds of the pupils purchased student-body cards. Nearly one-third of the total receipts were paid by adults, alumni, and friends of the school and by the contribution of the congress of parents and teachers. The pupils themselves paid \$542.15, or an average of approximately 60 cents per pupil for the semester. For this amount they received a student-body card, admission to dances and other school events, the school newspaper, the semiannual, and they have helped finance their extraclass activities and have contributed to the student-aid fund. In the list of expenditures, it is noteworthy that every item has gone directly to enterprises immediately affecting the pupils.

In schools where extraclass activities are partially or wholly self-supporting, desirable practices in the financing of extraclass activities indicate that:

- 1 All receipts should go into the general student fund
- 2 Funds should be expended for worth-while purposes as they are acquired
- 3 Accounting should be simple but exact.
- 4 Elaborate and expensive school projects should not be undertaken
- 5 There should be no special campaigns to raise funds
- 6 Student-body cards should be offered, but there should be no pressure placed upon pupils to purchase them
- 7 Student-body cards should entitle the holders to reductions in the subscription price of the annual, in the admission to dances and other school programs
- 8 Pupils who are unable to purchase student-body cards and those who are unable to participate in school affairs because of admission charges, fees, or subscription rates should be provided with work opportunities that are adequate to pay for these extraclass activities

9 No funds should be derived from advertising

10 There should be no exploitation of pupils or of the community

It is the policy of many schools to add funds raised by various activities to the general student-body fund from which they are allocated to the different activities on a fair and judicious basis. It is, of course, important that all student-body funds should be handled in a businesslike manner. Some bonded employee of the school should be responsible for these funds and should keep accurate records of all financial transactions. Many schools find that it is advantageous to have this work done by the school secretary, other schools assign the work to some faculty member. All money received should be banked promptly, and expenditures should be made by check, countersigned by the principal. Student-body accounts should be audited regularly by a capable and responsible person preferably the official auditor of the school system. Where students assist in handling the school funds, thorough checking of all accounts and transactions is imperative. Such checks teach pupils the importance of their responsibility in financial procedures and minimize the temptations placed before them.

Directing and Coordinating Extraclass Activities—Fundamentally, the principal is responsible for the extraclass activities program in the same manner that he is responsible for all other aspects of the school. Since principals cannot perform personally all the functions for which they are responsible, they frequently delegate a large portion of the administration of the extraclass activities program to some member of the faculty. In some schools, this responsibility is delegated to a vice-principal or dean, whereas in others a special office is created for this work under such titles as "director," "supervisor," or "coordinator of extraclass activities." In this volume, the title "coordinator of extraclass activities" is used.

Role of the Coordinator—The responsibilities of the coordinator vary greatly in different schools depending upon the size and the general administrative policy of the school. In many schools, the coordinator has responsibilities as follows:

- 1 To assist in the selection of faculty sponsors for extraclass activities
- 2 To act as chairman of the faculty calendar committee that builds the semester schedule of extraclass events such as dramatic performances, pageants, dances, open house programs for American Education Week, traffic reviews, field days and other special assemblies and programs
- 3 To handle the administrative details necessary in the presentation of special programs. Such details include making arrangements for all pupil programs that are held off the school premises, securing parental consent for

pupil participation, arranging teacher chaperonage, approving the purchase of materials needed for school events, and allocating rooms and facilities for practice, rehearsal, and other activities

4 To publicize and promote extraclass activities through the use of the assembly, bulletin board, the newspaper, pupil bulletins, and the semiannual

5 To assist the principal in securing outside talent for assemblies and other special occasions and ceremonies

6 To help sponsors and teachers relate the extraclass activities to regular classwork

7. To supervise all assembly programs

8. To supervise elections and the work of student body officers

9 To train pupils in the techniques of presiding at assemblies or other meetings

10 To greet guests and assist the principal in serving as host of the school

Successful teaching experience is a necessary qualification for the coordinator of extraclass activities. In addition, special training is desirable in the administration of extraclass activities in the junior high school, as well as special training in dramatics and public speaking. Of greater importance than special training for the work of coordinating extraclass activities are the personality qualities and interests of the teacher assigned these duties. Personal qualities such as charm, graciousness, and attractive appearance contribute to the ability of the coordinator in gaining the good will, respect, and cooperation of teachers and of persons outside school who may be needed to assist in extraclass activities. Because of the scope of the extraclass activities program, it is of utmost importance that the coordinator be able to organize programs and to coordinate in a thorough and methodical manner all the varied personal elements involved.

If the coordinator is to fulfill his responsibilities efficiently, ample time must be provided in the schedule for these duties. In average-sized junior high schools, one-half of the teaching day is frequently allowed the coordinator for this work, in larger junior high schools, a full day may be required.

Role of the Sponsor—The success of the extraclass-activities program depends in a large degree upon the interest, ability, and enthusiasm of the sponsors of the activities. Indeed, the work of the sponsor is very similar to that of the successful teacher in regular classes. When extraclass activities are regarded as an integral part of the total program, the school assumes responsibility for directing, supervising, and motivating the learning in these activities, even though this learning may be of a somewhat different type from that which takes place in the regular classroom. The sponsor is to a

position to discover many pupil characteristics, traits, interests, and needs that are not always evident to teachers in regular classes. Such information may be of inestimable value to teachers and counselors and should be made available to them through conferences or through anecdotal data. Similarly, regular class teachers and counselors should provide sponsors with all available data that will enable sponsors to understand the pupils in their particular groups.

Schorling suggests the following list of questions, designed to help the prospective sponsor make a self-appraisal:

- 1 Have you had some special training that has prepared you for the responsibilities as a sponsor of this particular activity? If not, are you willing to learn?

- 2 Are you interested enough in the activity so that it is likely to develop as a recreational hobby for you?

- 3 Will you welcome suggestions that will improve your efficiency as a sponsor?

- 4 Do you plan to cooperate with sponsors of other activities and with your principal?

- 5 Do you think that you can manipulate the total situation so that pupils will like to have you as a member of the group?

- 6 Are you acquainted with the general principles that should govern the administration and supervision of extracurricular activities?

- 7 Do you understand the specific aims and functions of the club you will sponsor?

- 8 Do you see in this activity opportunities for such guidance as may be suggested by the terms "self-expression," "leadership" and "mental health"?

- 9 Have you any plan for appraising the value of this activity for the participants? for the school?

- 10 Do you deal effectively with social and informal teaching situations?¹

The Role of the Teacher—All teachers in the school should share in the extraclass activities program whether they are specifically assigned as sponsors or not. Frequently they are needed to assist the coordinator and sponsors of extraclass activities when special programs are presented. All teachers should work toward the establishment of an effective relationship between regular class-work and extraclass activities. They should become familiar with the extraclass activities program and encourage pupils to partici-

¹ SCHORLING, RALEIGH *Student Teaching* p. 244. McGraw Hill Book Company, Inc., New York, 1940.

pate in these activities when such participation will aid in pupil development.

SUMMARY

The activities that the school provides outside regular classes are known as "extraclass activities" and are an integral part of the total school program. These activities should supplement and enrich the regular instructional program. Many extraclass activities evolve from the regular classes; others develop into regular instructional courses.

The purpose of extraclass activities is to furnish worth-while experiences for pupils in order to satisfy educational interests and needs that are not provided through the regular instructional program. Therefore, these activities should evolve in accordance with pupil interests and needs, and they should be administered as a part of the school program, scheduled on school time, and sponsored and directed by teachers as a part of the teaching load.

Pupil participation in extraclass activities should be on the basis of individual pupil interests and needs. Pupils should be guided in their choice of activities by the counseling staff, just as they are guided in their choice of regular instructional activities.

Insofar as possible, extraclass activities should be financed from school funds but regardless of the method of financing, funds should be handled by means of businesslike procedures and should be allocated judiciously in accordance with the requirements and educational contributions of the activity. Financial support of activities by pupils should be voluntary and without pressure.

The success of extraclass activities depends in large measure upon the skill and enthusiasms of the coordinator of the program and upon the leadership of the sponsors of the particular activities. Even though some teachers do not serve as sponsors, every teacher shares a part of the responsibility for promoting an effective extraclass-activities program.

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CHAPTER X

ENRICHING INSTRUCTION THROUGH THE LIBRARY

Preceding chapters point out trends in instructional practices and suggest some of the newer responsibilities of teachers in planning improved instructional units and courses. These newer trends and responsibilities place added burdens upon the school library and the librarian as well as upon the teacher. The use of suitable units, the use of problems and projects, and the use of various socialized and individualized instructional procedures all require pupils to do more research, reference, and collateral reading than is ordinarily required of them in more formal classes using a single textbook. In like manner, these newer instructional practices require teachers to become familiar with library resources both for planning their courses and for guiding pupils. The modern emphasis upon the development of reading skills and upon the development of habits and attitudes of recreational reading also create new responsibilities for school libraries.

LIBRARY OBJECTIVES

The objectives of the modern school library are broader and more functional than they were some years ago. Once libraries were considered merely collections, storehouses, or depositories of books. To be sure, libraries must have books in adequate numbers and in appropriate kinds for the specific purposes they are intended to serve, but the modern school library must have more than books; it must have magazines, fugitive materials, objective aids, and various other supplementary instructional materials for pupils and teachers. A few libraries attempt to make general collections of books for all possible uses and purposes, but school libraries must be highly selective in their choice of materials. Junior high-school libraries are or should be created specifically to serve (1) the needs of junior high school pupils and (2) the needs of the junior high school staff. Fargo lists the following seven objectives for school libraries:

1. To acquire suitable library materials and organize them for pupils and teachers

2. To make the library an agency for
 - a. Curriculum enrichment
 - b. Pupil exploration
 - c. The dissemination of good literature
3. To teach the skillful use of books and libraries in the interest of research and self-education
4. To create an atmosphere favorable to the growth of the reading habit
5. To stimulate library appreciation
6. To demonstrate the desirability of books and libraries as the companion of leisure
7. To provide fruitful social experience¹

Johnson found that the three most important functions of the secondary-school library were (1) to enrich the curriculum and supply reference material, (2) to provide for the worthy use of leisure time, and (3) to train pupils in the use of books and the library.²

From being a mere collection of books, the modern school library is rapidly becoming the coordinating center of the entire instructional program, with service to pupils and teachers representing the keynote of its operation. This newer concept of the function of the library is well presented in the following statement of guiding principles formulated by the Cooperative Study of Secondary School Standards:

The library should be a center of the educational life of the school, not merely a collection of books. It should provide the reading and reference facilities necessary to make the educational program effective. Its books and other resources should therefore be chosen in the light of the specific aims and purposes of the school. Many pupils do not have access to good books and periodicals in their homes and therefore lack the background which acquaintance with such material would supply. By teaching pupils how and where to find library materials, how to select them, and how to use them effectively, the library should provide pupils with valuable means not only of extending their knowledge and understanding but also of developing desirable leisure habits. The library and its facilities not only should be readily and easily accessible but also should be so attractively equipped that aesthetic tastes will be developed.

Adequate provisions for the school library should include the following: (1) a well educated, efficient librarian; (2) books and periodicals to supply the needs for reference, research, and cultural and inspirational reading;

¹ FAROO, LUCILE F, *The Library in the School*, p. 23, American Library Association, Chicago, 1939

² JOHNSON, B. LAMAR, "The Secondary-school Library," *Bulletin*, 1932, No. 17, *National Survey of Secondary Education*, Monograph 17, p. 7, U.S. Office of Education, 1933

(3) provision for keeping all materials fully cataloged and well organized, (4) budget which provides adequately for the maintenance and improvement of the library, (5) encouragement of the pupils in the development of the habit of reading and enjoying books and periodicals of good quality and real value.¹

TYPES OF SERVICE

The objectives, purposes, or functions cited above include four essential services of the modern school library—namely, (1) to collect and house suitable books, supplementary, and illustrative materials, (2) to promote skill and pleasure in general reading, (3) to promote the reference and research uses of the library by pupils and by teachers, and (4) to coordinate instructional resources of the school so as to promote the general usefulness of the library to teachers, pupils, and administrators in regular and in extraclass activities.

Collecting and Housing Materials—The major responsibility for collecting, cataloguing and housing materials of the junior high school library must necessarily rest with the school librarian. It is her duty, within the limitations of the library budget, to see (1) that there are adequate reference works and supplementary texts for the various grades and courses of the school, (2) that all types of instructional materials are included in the library collection, (3) that there are a sufficient number of appropriate titles for fiction and nonfiction recreational reading, and (4) that these are all classified and shelved so as to further their availability and use by pupils and teachers.

Reference Works—The adequacy of the junior high school library for reference and research must be interpreted from the point of view of the reference and research needs of junior high school pupils. Research standards and needs for senior high schools, junior colleges, and universities obviously are of a different character from those found in junior high schools, and consequently the titles that ought to be found in the junior high-school library differ in many respects from those that are appropriate for the higher schools. To be sure, there must necessarily be much overlapping between junior and senior high schools, but with limited budgets the objectives of research and reference of junior high schools may be served adequately without many of the titles needed in the senior high school.

¹ *Evaluation of a Secondary School Library*, p. 7, Cooperative Study of Secondary School Standards, Washington, D. C., 1938.

The scope of the reference collection should be determined first by the curricular and extracurricular needs of pupils and second by corresponding needs of the school staff. The scope is limited by the library budget and should be limited in some measure by the public library collections and by the teachers' professional library that may be maintained for the entire school system. In any case, there must be made available to pupils the standard reference collection of suitable dictionaries, encyclopedias, atlases, handbooks, literature collections, historical collections, government pamphlets and bulletins, magazine and book indexes, catalogues, and bibliographies.¹ There must also be available an adequate number of up-to-date supplementary textbooks covering all phases of the school's activities.

Supplementary Materials—Chief among the supplementary materials that should be collected and housed by junior high-school libraries are the almost limitless objective aids to instruction. These are of such great importance in modern education that they are discussed more at length in Chap. XI.

Recreational Reading Materials—Providing suitable material for recreational reading at the junior high-school level is one of the most difficult problems faced by school librarians. Recreational reading materials may be divided into two types: the informational, interpretive, nonfictional, or factual materials, and the strictly pleasurable fictional materials: poetry, adventure, humor, romance, and other types of youth stories, both classical and modern. Both types of recreational materials are needed in the school library, since both contribute to the development of desirable recreational-reading habits.²

Interest in informational reading materials often grows out of regular classwork. It should not be necessary to point out that librarians possess no clairvoyant powers, that they are unable to divine the secret intentions and plans of teachers, and yet many teachers act as though this were the case. Not infrequently, teachers plan units and even whole courses that entail extensive

¹ For a more complete discussion of reference collections, see FARGO, *op. cit.*, pp. 209-221.

² For suitable recreational reading lists see NATIONAL COUNCIL OF TEACHERS or YOUNGER Committee on Recreational Reading. The Council, Chicago, 1933. *Leisure Reading for Grades Seven, Eight, and Nine*, The Council, Chicago, 1938. The Booklist American Library Association, Chicago. Published semi-monthly, October to June.

reading reference, and research by pupils without bothering to check with librarians to determine whether suitable or adequate materials are available in the library. Often, too, teachers fail to use interesting or exciting supplementary nonfiction materials that are related to their units and projects, because they do not know that such volumes are in the library. In order to assure the full use of the library resources, teachers should do their planning in cooperation with the librarian well in advance of the classroom needs. Thus, when needed materials are not available, they may be either ordered or borrowed and made available to pupils.

It is not always possible to enjoy a liberal library budget, and it is therefore often necessary for librarian, teachers, and pupils to work cooperatively to supplement the library resources. As an example, suppose a class of 30 pupils are interested in a unit on household furniture but find that the library picture file contains relatively few good illustrations of national or period furniture patterns. In cooperation with the librarian, a library project might be organized in which pupil committees would collect from discarded magazines and books and from private collections a fairly good sampling of illustrative plates, first for use in their classroom unit and, upon the completion of the unit, for general use in the library. Much valuable material may thus be collected with no cost to the library or to the school, save that of preparing the materials for future use. When funds are available, when librarians are competent, and when teachers work with librarians, the library can become the real center of the school's instructional resources.

Promoting Recreational Reading—Undoubtedly the most serious retarding factor in the promotion of recreational reading has been the unwillingness of many teachers to look upon the school as a suitable place to have fun through reading. Even yet the attitudes of some teachers almost wholly prevent pupils from reading for pleasure. There is still too much truth in the statement of one pupil, "I want to hurry up and read before I have to study it in class, because then it won't be any fun at all." Related to the attitude of teachers, however, has been the unwillingness of librarians to purchase recreational books and magazines. The attitudes of teachers and the lack of appropriate, interesting library materials, coupled with the strong appeal of commercial recreation and of physical and social activities, have contributed in no small measure to the deplorable paucity of reading interests and habits noticeable among youth throughout the nation.

Librarians and, to a lesser extent, teachers as well are too prone to think of pupil reading interests and of suitable literature in terms of the chronological ages of pupils. The analysis of reading abilities of junior high-school pupils as these are measured by standard reading tests reveal wide variations among pupils of every age and grade level. Some seventh grade pupils are able to read about as well as the average second grade pupils, others in the same grade read with the skill and comprehension of the average twelfth grade high-school pupil. Reading for pleasure implies that the materials can be comprehended easily and rapidly. For the most part, recreational reading must be on a level of difficulty below the maximum attainable by pupils under test conditions. The chronological age of pupils therefore becomes a highly unsatisfactory criterion for determining reading interests.

The important educational objective of teaching pupils to read for pleasure is relatively new on the educational scene. However, educators are becoming increasingly sensitive to this problem, and they are devising appropriate means of cultivating attitudes and habits of reading literature for the sheer joy of the experiences provided.

Pupils from homes of high cultural status, where the cultivation of literary tastes, habits, and skills are a regular part of family life, often need little development or encouragement in this area during school hours. Their problem is one of arranging regular duties and responsibilities so as to permit sufficient time for reading the literature that they like. The responsibility of the school with such pupils is to help them select the most suitable and worth while books and stories from among the vast array of new and classical literature that is available. Each year there are published a good many more volumes than anyone can read, even by devoting full time to reading. Under present requirements and in the present tempo of events in child society as well as in adult life, it is an unusual pupil who can find time to read an average of one book each week just for pleasure and still engage in the many other interesting and necessary activities. The problem of selecting must be a part of the problem of improving literary tastes and of pupil responsibility for the choice of reading materials. In this larger problem, both teachers and librarians share an important responsibility.

A more basic problem, however, is raised by pupils who come from less favored homes, where little attention is given to literature

and where personal pleasures are centered in nonintellectual activities. With such pupils, the powerful force of family influence, tradition, and long-established personal habits must be overcome in order to promote interest in recreational reading. More often than not, pupils from homes of low socioeconomic status are average or below average in intelligence and hence are deficient in vocabulary development, reading skill, reading comprehension, and reading interests. The problem of developing the disposition to read for pleasure involves (1) the development of vocabulary, (2) the acquisition of improved reading skills, and (3) the inculcation of reading interests. In part, efforts to improve reading interests and abilities are centered in specific remedial or developmental classes under regular classroom teachers. In part, however, children must learn to read by reading. The responsibility of the school thus becomes many-sided, with many specific objectives centered around reading. These outcomes are well stated by Tyler from the Progressive Education Association study of adolescent reading:

- 1 Mastery of reading skills
- 2 Familiarity with various forms of literary art
- 3 Disposition to read for fun
- 4 Use of reading in developing serious interests and purposes
- 5 Acquaintance with some "book of all time" in each of the arts and sciences
- 6 Effective use of reference books
- 7 Acquaintance with adult ideas and life situations of increasing maturity, complexity, subtlety, and scope
- 8 Recognition of certain authors, or of characters in fiction and biography as kindred spirits
- 9 Use of reading in developing emotional stability
- 10 Use of reading as a means of vicarious participation in adult situations¹

The service contributions of the library toward these ends are centered in the promotion of habits of recreational reading and in the development of skill in reference and collateral reading. The initiative and resourcefulness of librarians and teachers are often taxed to the limit in their effort to discover ways of making books and other library materials attract pupils from other recreational

¹ TYLER, RALPH W. "The Study of Adolescent Reading by the Progressive Education Association." *Library Trends* p. 275. Louis W. Wilson, ed., University of Chicago Press, Chicago, 1937.

activities. Often all that pupils need for several hours of pleasurable reading is a good start, something to attract their attention and arouse their interest. For this purpose, librarians may arrange attractive displays of books and magazines, post advertising literature on bulletin boards, promote book clubs, present book reviews, dramatize books and stories in assembly programs, stimulate the organization of active library committees from regular classes to report on new and interesting library materials and to inform librarians of class or club needs. Numerous other suitable activities for junior high-school librarians are suggested by Johnson¹ and Fargo.² Probably as important as such activities is the personal attitude of the librarian toward recreational reading and the attractiveness and inviting quality of the recreational reading room in the library.

Promoting the Reference Use of the Library—When pupils ask the librarian, "Where can I find something about . . ." or "Is there any material on . . ." there is presented one of those "teachable moments" that all teachers cherish. A pupil with a problem asking for help, a pupil willing to search but unfamiliar with library tools and resources. Some librarians satisfy pupil requests directly by finding the needed book or materials, others, and fortunately their number is increasing, use the needs of the pupil to teach him how to use library tools to find what he wants. Such teaching may involve the use of the card catalogue with explanations of the data contained on cards. It may involve interpretations of the techniques of alphabetizing cards and of the procedures of classifying books. Or, again, it may involve explanations of shelving arrangements and the use of call numbers in finding books. It may involve the use of periodical indexes, dictionaries, bibliographies, indexes of books, files of bulletins and clippings, encyclopedias, and other standard reference works. In many cases library instruction may go beyond teaching the use of library tools and involve helpful suggestions on how to read certain material, how to abstract, summarize, or otherwise prepare materials for classwork. Throughout all these procedures it should be the principal purpose of the librarian to promote in the pupil independent facility and resourcefulness in locating and using the needed materials.

¹ JOHNSON *op cit.*, pp 75-92

² FARGO L. F., *Activity Book for School Libraries*, 208 pp., American Library Association, Chicago 1938.



A recreational reading wing (Photograph courtesy of public schools San Jose Calif)

In modern schools, much research and reference work is done by pupil committees. A small group of pupils may come to the library to hunt for materials for a joint report, the need for which has grown out of regular classwork or out of some interesting extra-class activity. The librarian is often confronted with such committee needs. Appropriate guidance and teaching with pupil groups often result in the development of superior reports for regular classwork as well as in the promotion of research skills among the pupils.

Direct group instruction may be given to pupils in the use of library tools. Such instruction may be offered by librarians in a separate library course, by teachers in a separate unit, or in connection with other classwork. The most desirable practice, however, is probably that of providing some group instruction by teachers in cooperation with the librarian. The need for such instruction may be developed by teachers in their regular classes. The technical instruction may be provided by the librarian first in the classroom and later with small pupil groups in the library. In the event that practice is needed in the preparation of bibliographies or in the use of alphabetical indexes or card catalogues this may be provided through suitable drill exercises in English or social living courses. For the most part group instruction tends to be ineffectual when it is provided apart from the specific needs and requirements of pupils. Regardless of the plan of conducting group instruction first consideration should be given to the immediate problems that are confronting pupils and to the wide practical applications of the instruction provided.

Although librarians accept the major responsibility for promoting the research and reference uses of the library it must not be supposed that teachers are thereby freed from this important responsibility. There are many ways in which teachers may encourage the use of the library. They may make specific class assignments requiring library research and they may take classes to the library to spend entire periods looking up materials. When special deficiencies among pupils are noted individual or group assignments to the library may be made. A library committee representing the class may report periodically on new or unusually interesting materials in the library. Librarians may be invited to speak to the class group. Posters advertising relevant materials may be placed on bulletin boards in the classroom. Trays of books may be exhibited in the classroom and direct instruction may be provided.

in connection with units or projects undertaken. Often classroom or departmental libraries are maintained to promote the availability and use of relevant books

Coordinating the Instructional Program—The school library exists not as an independent unit or department of the school but as a dependent unit serving all departments and persons in the school. In this capacity, the librarian and the library staff are placed in a particularly strategic position to assist in the coordination of the entire instructional program.

University students and even teachers in training often believe that their days are full, that the requirements of instructors, of social activities and perhaps of a part-time job place inordinate demands upon their time. But only those persons who have taught in modern schools can appreciate the degree of pressure that is placed upon the teacher's time. Responsibility for five classes each day, a study hall, an extraclass activity, faculty meetings, committee meetings, community responsibilities, all demand a part of the teacher's day and night. Furthermore, teachers are expected to be familiar with technical advances in their own teaching fields and with a vast array of cultural contributions in general literature, art, music, and science. Added to these requirements is the newer demand that teachers be familiar with the entire instructional or experiential program that is planned and provided for pupils.

In an average junior high school with from 750 to 1,000 pupils and from 30 to 40 teachers, the task of coordinating all instructional activities so that pupils may experience greater continuity of growth requires the service of a technical coordinating center. The modern library serves this function.

Through general faculty meetings in which the principal outlines current programs of general interest, through teacher committee meetings, through conferences with counselors, and the coordinator of extraclass activities, the librarian may keep in touch with many developments and needs of the school. Through a careful study of the schedule, the program of studies, special events of general educational interest, and events of local community interest, the librarian may anticipate the needs of teachers and administrators. Many special events and occasions are observed annually in schools. Bibliographies and files of relevant source materials may be kept up to date in anticipation of their use by teachers and pupils. The principal is often called upon for reports at educational meetings and for addresses in the community. Librarians who are moti-

vated with service ideals are often able to anticipate such needs. Although the principal is expected to be familiar with all the latest developments in all instructional fields, occasionally administrative demands upon his time may cause him to miss important educational literature. Here, too, the alert librarian can see that important studies are brought to his attention for study or for referral to teachers. Thus, in many ways, the librarian may contribute to the coordination of the instructional program of the school. Notably, librarians may (1) inform teachers of related activities being carried on in other classes, (2) suggest suitable library materials that supplement those used in other classes, (3) anticipate the various needs of teachers and administrators, and (4) assist pupils to interrelate their library reading experiences.

THE FUNCTIONAL LIBRARY UNIT

In preceding sections, certain important functions and services are suggested as characteristic of the modern junior high-school library. The realization of these functions and services may be facilitated by adequate and suitable library quarters, and their realization may be hindered by lack of space, poor arrangement of rooms, and insufficient equipment. The effective planning and organization of the library unit may therefore play an important part in the total contribution of the library to the development of pupils.

Traditionally, the library was presumed to require only a reading room and a librarian's workroom or work closet. For small libraries, such quarters are adequate to classify and house books and to provide reading space for pupils. The modern school library, with its expanding functions and services, can no longer be housed adequately in one or two rooms. In order to fulfill the responsibilities allocated to it in the newer school program, the junior high-school library requires a suite of several rooms, each of which is planned to promote a special library service function.

There are two relatively distinct reading room services that should be provided for pupils and teachers: one is reference and research, the other is recreational reading. The atmosphere, the equipment, and the materials that are needed to promote these functions are different, and consequently the room space and equipment should be planned separately.

Research and Reference Wing—The reference wing should be planned and equipped to facilitate reference and research work.

Both general and special reference works should, of course, be housed in this wing. Research reading often requires more intense concentration than general or recreational reading, and special provisions should be made to make such work easier. The reference room should be comparatively free from disturbing noise originating either in the room itself or from activities outside the building. Much can be done to deaden noises through proper use of soundproofing materials and other special room features.

The reference room of the library should set the lighting standard for the entire school. Both natural and artificial lighting should be adequate. The size of the print in dictionaries, encyclopedias, the *Readers' Guide*, and in many bulletins and general reference works is entirely too fine to be read under "normal" lighting conditions. From 20 to 30 foot-candles of indirect light are necessary for such reading if eyestrain is to be prevented. Eyestrain is both discomforting and fatiguing. It is not at all unlikely that much of the unwillingness of pupils to concentrate upon detailed reference study may center in the unconscious effect of insufficient light on fine print. Proper attention to the factor of lighting may do much to encourage the use of the library. It should always be remembered that pupils are unaware of the cause of eyestrain and that they are often unaware of the fact of eyestrain. However, they do experience general fatigue, and they do develop a general attitude of avoidance toward situations that cause eyestrain.

In the reference wing, the general arrangement of tables or desks may be formal and dignified in keeping with the character of the work being done. But since a large amount of the research work of junior high school pupils is done in committee groups, it is desirable to provide several small conference rooms for pupils where group discussions may take place without interfering with individual work that may be going on in the main room and where committee reports may be prepared from various library materials. These rooms may also be used by the librarian for conferences with pupils.

Museum—The importance of all objective aids to instruction is discussed in Chap. XI. The availability of objective aids definitely affects their use. The technical problems involved in the preparation, classification, cataloguing, housing, and circulation of objective aids are essentially library problems that may best be handled by the librarian or by library assistants. The greatest use of objective aids results from having them catalogued with other instructional materials.

A highly desirable arrangement of the room or rooms housing museum exhibits, still pictures or prints, stereopticon slides, models, maps, charts, globes, and electrical recordings is to have them adjoining the reference wing of the reading room. Such an arrangement facilitates their use in the library by individual pupils and by committee groups, just as all other library materials are used.

Classroom —In order that large or small groups of pupils may be instructed in the use of the library, the librarian needs to have a classroom adjoining the reference wing of the reading room. This room should be planned so that it may be entered from a corridor without entering the reference-room proper. It should be equipped for extensive laboratory work with library tools. The library classroom should, of course, be available to teachers who may wish to bring a class to the library for instruction in the use of the library or for the study of museum materials or other objective aids that are difficult to transport to regular classrooms.

Librarian's Workshop —Also adjoining the reference room should be the librarian's office and her workshop, where all new library materials may be prepared for use and where mending and repair-work may be carried on. It is particularly important to have a workshop that is well lighted and ventilated, large enough for a sufficient number of clerical assistants to carry on the technical details of this aspect of the librarian's work. Important, too, are adequate shelving and storage space for supplies.

Teachers' Conference and Workrooms —To facilitate instructional planning by teacher committees, it is desirable to provide a teachers' conference room that is also connected with the reference wing of the library. Here teacher committees may meet with the librarian to examine and select those instructional materials that are most suitable for the units or projects under consideration. Although the librarian may not be needed for full conferences, she may be called in when needed, without interrupting for too long a period the other activities she may be supervising. The work of such committees is facilitated by having readily available all the relevant resources of the library.

An additional part of the teacher's work in the library is the preparation of special instructional materials for classroom use. Frequently, for example, glass slides need to be prepared from reference works, and outlines, summaries, or bibliographies need to be duplicated. For the convenience of teachers who are doing such work, it is desirable to provide a workroom adjoining both the

teachers' conference room and the reference room. This room should be equipped with typewriters, duplicating equipment, desks, tables, files, and other equipment that may be needed by teachers in the preparation of instructional materials for classroom use. Although the arrangement and adequacy of room space and equipment are not the most critical factors in reference and research work, they are important factors and wherever possible should be given appropriate consideration.

Recreational-reading Wing—A reading room wing that is intended to promote recreational leisure-time reading should be attractive, inviting, comfortable, and informal.

Highly desirable are window nooks with comfortable chairs or window seats, chair groupings, where pupils may share experiences through books, library patios with attractive porch furniture, and various other arrangements enabling pupils to relax and enjoy themselves while they read. If the schools are to be successful in developing dispositions to read for pleasure, it is likely that much more attention will need to be given to the quarters that are provided for recreational reading.

ADMINISTRATIVE ASPECTS OF LIBRARY SERVICE

The administrative policies of school libraries vary in different communities. Although the educational needs of pupils are not materially affected by the size of the school, the library is definitely affected by pupil enrollments through the library budget. A minimum budget of \$1 per pupil per year is widely accepted.¹ In 63 California junior high schools, the average expenditure for library purposes per pupil in average daily attendance is shown in Table XXII to be \$1.58. It is interesting to note that these schools spend nearly as much for supplementary texts as for all other materials, including binding, repairs, and supplies.

When small junior high schools are seriously limited by the library budget, it is often desirable to resort to certain compromise expedients in order to provide fairly adequate library resources. Among practices of this nature should be mentioned (1) opening the school library to the public, (2) opening the school library to elementary schools, (3) promoting a county library system, and (4)

¹ NATIONAL EDUCATION ASSOCIATION, COMMITTEE ON LIBRARY ORGANIZATION AND EQUIPMENT. *Standard Library Organization and Equipment for Secondary Schools*, American Library Association. Chicago 1920.

cooperating with the public library. This latter practice is one of the newer and more promising trends, encouraging a closer cooperation between the school and the community. When a satisfactory arrangement can be worked out between the school and the public library so as to combine the resources of both, it is possible to overcome many of the limitations of small budgets without placing added financial burdens upon the district. Since the school library and the public library are public agencies serving the same clientele, there would seem to be no fundamental reason why such combined services might not be effected in many smaller communities.

TABLE XXII—CURRENT EXPENDITURES, NOT INCLUDING SALARIES, FOR LIBRARY PURPOSES PER UNIT OF AVERAGE DAILY ATTENDANCE IN EACH TYPE OF SECONDARY SCHOOL*

Type of school	Number of schools	Library books, periodicals, binding, repairs, supply	Supplementary texts	Total
Junior high school	63	\$0 81	\$0 77	\$1 58
Junior-senior high school	31	1 16	1 10	2 26
Four-year high school	135	1 28	1 26	2 54
Senior high school	31	0 90	1 32	2 22

* Adapted from "The Secondary School Library in California" *Bulletin of the California State Department of Education*, 2 p 38 April, 1939

Study Hall.—The desirable relationship that should exist between the library and the study hall is a perennial problem for which there is no crucial answer. For years it has been the practice of many junior high schools to schedule pupils for study halls during so-called "free" periods. Study halls usually have large numbers of pupils under the direction of one teacher who does little more than keep order. Both the large numbers of pupils and the diverse study interests of those assigned to the study hall for the most part preclude the possibility of effective supervised study. In an effort to break away from undesirable aspects of the traditional study hall, it is sometimes combined with the library. In favor of this plan, it is claimed that when the librarian is placed in charge of study-hall groups, teacher time can be freed for other activities, the formal atmosphere of the old study hall is broken down, and pupils are encouraged to use more library materials. On the other hand, it is claimed that the combination library-study hall tends to overcrowd

normal-sized libraries, creates a more formal atmosphere in the library, and engenders a feeling of compulsion among pupils

Many schools locate the study hall adjoining or close to the library but separate from it. Under this arrangement, pupils may move freely from study hall to library as interest or need arises. Johnson¹ found that the majority of principals and librarians favored this plan, and, indeed, there seems to be no serious objection to it.

Attendance Records—All pupils are scheduled for all the periods of the school day, and pupil attendance should be checked for each period. In order to provide maximum use of the library, provision must be made for pupils to leave their study hall or classes to come to the library. Not infrequently, pupils take advantage of situations that fail to assure adequate controls over attendance. In some schools, the responsibility for taking attendance in the library is placed upon the librarian, in others, teachers are assigned to the library to take attendance and to keep order.

A plan that is widely used and that apparently overcomes objections to other practices involves the following provisions: (1) any pupil who is assigned to a study hall during any period of the day may report directly to the library, (2) upon entering the library, each pupil signs an attendance slip, indicating his study-hall teacher and room number, (3) attendance slips are deposited in a box on or near the librarian's desk, (4) pupil assistants distribute the attendance slips to the proper study hall teacher, who deletes from his absentee list the names of all pupils for whom there are library-attendance slips. This practice provides freedom in the use of the library, prevents overcrowding by pupils who do not wish to use the library, places little attendance responsibility upon the librarian, and provides for an attendance check upon all pupils.

In general, all the administrative regulations and policies of the school library should be planned to promote the maximum realization of the library objectives. Both pupils and teachers should be restricted as little as possible, yet the time of the librarian and of library assistants must not be consumed by unimportant details of pupil control. Although the formal supervision of pupils and pupil work in the library is a responsibility of the librarian, in large schools or in schools where study hall groups are combined with the library, classroom teachers should relieve the librarian of the major portion of such responsibility.

¹ Johnson, *op. cit.*, p. 37

SUMMARY

The modern junior-high school library is rapidly attaining a place of central importance in the instructional program of the school. The change in the status of the library from a mere book center to its present position of prominence has resulted from newer conceptions of the service functions of the library. Briefly, these may be summarized as (1) collecting and housing for optimal availability and use an adequate number of suitable books and supplementary materials that are intended to enrich the instructional program of the school, (2) promoting interest, pleasure, and facility in general recreational reading among pupils, (3) encouraging skillful and effective reference and research uses of the library by pupils and teachers, and (4) coordinating the instructional resources of the school in order to promote the general usefulness of the library to teachers, pupils, and administrators.

In order to fulfill the newer service functions that are being allocated to it, the library needs to be housed in a special library unit composed of several rooms, each of which is designed to further a special library service. The research and reference services may thus be facilitated by suitable quarters that include special provisions for housing objective aids, for library instruction, for pupil conferences, for teacher conferences, for the librarian's workshop, and for study-hall relationships. Similarly, the wing or room for recreational reading may be arranged, equipped, and decorated so as to promote this function of the library.

Administrative policies should promote the service objectives of the library. The size of the school and hence the size of the library budget materially affect the administrative policies. Small schools often open the junior high-school library to elementary-school pupils or to the public, coordinate school- and county library resources and sometimes evolve a cooperative arrangement with public libraries in the community. Two administrative problems that are in a transient stage of solution are the relationship of the study hall and the library and the problem of taking attendance and supervising pupils in the library.

With a greater appreciation of the contribution that the library may make to the instructional program, it is likely that school systems will provide more adequate budgets and a better trained and more adequate library staff, so that libraries may better enrich and coordinate the instructional activities of the school.

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CHAPTER XI

OBJECTIVE AIDS TO INSTRUCTION

The current widespread interest in the use of objective aids to instruction is an outgrowth of seventeenth century *sense realism*, which was related to education by such men as Johann Amos Comenius, through *Orbus pictus*, Jean Jacques Rousseau through *Emile*, Johann Heinrich Pestalozzi, through *How Gertrude Teaches Her Children*, and, in fact, through the whole Pestalozzian movement, which, as Pestalozzian "object teaching," became fairly popular in the United States through Edward A. Seldon and the Oswego movement. Regarding Pestalozzian ideas and methods, Cubberley writes

What Pestalozzi tried most of all to do was to get children to use their senses and their minds, to look carefully, to count, to observe forms, to get, by means of their five senses, clear impressions and ideas as to objects and life in the world about them, and then to think over what they had seen and be able to answer his questions because they had observed carefully and reasoned clearly.

The introduction of the study of natural objects in place of words, and much talking about what was seen and studied instead of parrot-like reproductions of the words of a book, revolutionized both the methods and the subject matter of instruction in the developing elementary school.¹

Although we may not minimize the importance of sense impressions in learning, we must recognize the fact that experiences are obtainable both directly through real objects in their natural habitats and vicariously through signs or symbols that stand for them. For the most part, objective aids to instruction are objective symbols that portray characteristics similar to the real objects and processes for which they stand. Objective aids serve the same psychological purpose as do words.

In elementary stages of concept formation, the more nearly symbols approach reality the more exact and refined will be the concepts that are evolved. After exact concepts are formed,

¹ CUBBERLEY, E. P., *Public Education in the United States*, pp. 390, 340, Houghton Mifflin Company, Boston, 1934.

abstract symbols serve adequately to revive and even relate them to other concepts. By means of this process, we may have vicarious experiences through reading. But before concepts are adequately formed or when they are indistinctly recalled, objective symbols are decidedly superior to word symbols in creating vicarious experiences. The more realistic sense impressions of objective aids serve to recall past experiences, to build new vicarious experiences, and thus to refine and enlarge concepts.

Regardless of the psychological soundness of "object teaching," several factors militated against its general use. A variety of instructional objects and objective aids was difficult to secure. Their effective use required special training and the expenditure of greater effort than the older memoriter type of teaching. Within recent years, however, a number of new inventions and improved processes have revived educational interest in pictures as objective aids to instruction. Notable among these are improvements in the techniques and apparatus of photography, such as better cameras and lenses, better printing, the invention of the incandescent lamp, and the development of the motion picture. Such improvements resulted in the production of superior pictures that found wide commercial use and stimulated interest in the possibility of pictures in instruction. A study of the instructional uses of pictures has resulted in a greater appreciation of all objective aids to learning.

Because the junior high-school age naturally is one of ever-expanding interests and widening horizons, there is a need to introduce pupils to many new objects, relationships, and processes in ways that build true meaningful concepts. For this reason, the wide use of all types of objective aids is highly essential in junior-high-school education. When objective aids are viewed as realistic symbols selected so as to contribute to pupil understandings through meaningful experiences, it becomes apparent that no one type of aid could possibly serve all instructional needs. It is therefore important for all junior high-school teachers to be familiar with all types of objective aids that may serve the varied instructional needs of pupils, and it is equally important for school systems to systematize and make available to teachers as wide a variety of objective aids as may be possible within the limitations of the community. It is the purpose of the present chapter to describe the more essential types of objective aids, to point out their unique contributions to instruction, and to suggest ways of making them available for all classroom purposes.

The general educational functions of all objective aids to instruction are to further the realization of the functions of instruction, that is, to promote: (1) the acquisition of knowledge, (2) the development of habits and skills, (3) the development of concepts and understandings, and (4) the development of attitudes and appreciations.

TYPES OF OBJECTIVE AIDS

Each type of objective aid contributes uniquely to the functions of instruction, and hence certain peculiar technical characteristics give to each type advantages for specific instructional purposes that others may not possess.

Excursions.—Modern educational excursions are prototypes of object teaching among animals and in primitive education. In one form or another, this kind of objective teaching has always served an important educational purpose, since it enabled the learner to experience things and life directly. The essential purpose of the modern educational excursion is to take pupils out of the classroom to study life, processes, and objects in their natural habitats. The complexity of contemporary civilization increases the need for pupils to experience aspects of life outside their immediate school environments. When the excursion is practical, it is an ideal way of providing pupils with these new experiences.

Educational excursions should be used to supplement and vitalize the regular instructional activities of the classroom, out of which have grown special educational problems that may best be solved by visiting and observing outside the school.

Techniques in the Use of the Excursion—The effectiveness of the excursion necessarily varies with the adequacy of the preparations made for it. Adequate planning involves a number of specific steps.

MAKING INSTRUCTIONAL PREPARATION—Pupils need to understand the educational problem facing them, where they may go to gain a better understanding of factors and relationships involved in the problem, what specific details and general relationships are to be looked for during the excursion, and how to observe and record significant facts and conditions. All these factors should become a part of the preparation for the excursion.

SECURING PERMISSION—Permission to go on an excursion should always be secured from the principal so that he may safeguard the interests of the school. Permission should likewise be secured in advance from those in charge of the place or institution to be visited.

aid to instruction in all fields, all teachers should use them widely and thus contribute to their use as basic reading tools

Cartoons—Cartoons are pictorial representations that evaluate, emphasize, and interpret events, conditions, or processes by means of fantastic, exaggerated grotesque, humorous, or satirical sketches. Cartoons are valuable means of bringing into relief particular points of view in social and political fields. Although newspapers and magazines have long used cartoons effectively, schools have been slow to adopt them. One of the earliest applications of cartoons in junior high school textbooks was made by Harold Rugg, in his *Social Studies Series*¹. The use of cartoons has become increasingly popular in junior high schools to arouse interest, focus attention, and to interpret or emphasize various aspects of social and political life.

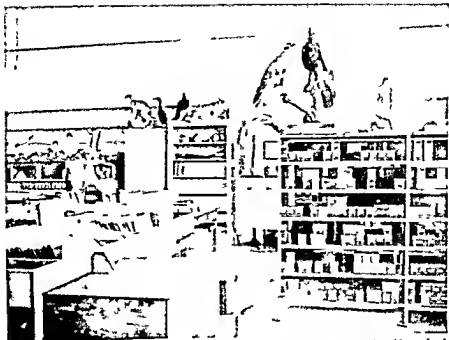
Posters—The poster is an arresting card or sheet designed to attract attention and create a single impression. It employs a type of symbolism characterized by contrasting colors of striking quality, bold forms, geometric designs, and unusual proportions. The highly specific function of posters in centering attention upon a single event or idea is widely exemplified through their extensive use in advertising.

Posters have four particular applications in schoolwork. These are (1) to impress pupils with a particular idea or fact in a unit of study, (2) to promote the establishment of ideals and habits, as, for example in safety, etiquette, morals, health, citizenship, (3) to provide pupils a means of advertising and promoting school activities and special campaigns, and (4) to develop the artistic talents of pupils through poster designing and production.

Charts, Graphs, and Diagrams—One of the important objectives of junior high-school education is that of introducing pupils to the current industrial and social scene. Charts, diagrams, and graphs depict unusually well the basic quantitative data underlying industrial and social conditions and trends and hence become essential objective aids to instruction.

Usually the term "diagram" includes both charts and graphs. Graphs are diagrams showing relationships among statistical series. Charts are diagrams presenting data in tabular or pictorial form to show interrelationships or the flow of operation. It should be noted, however, that different varieties of charts and graphs are not easily classifiable. The important thing for teachers is to

¹ RUGG, HAROLD *Social-science Course* Vols. I-VI, Ginn and Company, Boston 1929-1932.



Objective aids available for classroom use (Photograph courtesy of public schools Berkeley Calif)



Animal and bird habitat cases (Photograph courtesy of public schools Berkeley Calif)

develop a wide familiarity with different ways of presenting data in graphic pictures so as to make them intelligible and meaningful. No one form can be best for all types of data and for all pupils, and hence versatility of presentation is to be encouraged.

Maps—As a form of graphic presentation, maps are particularly useful in showing

- 1 Physical divisions and characteristics of the world, both evolutionary and present
- 2 Political divisions and subdivisions of the world both evolutionary and present
- 3 Time relationships longitude and latitude
- 4 Climatic and temperature conditions
- 5 Distribution of resources flora fauna mineral
- 6 Distribution of racial groups, with their cultural and industrial characteristics

Although maps of one kind or another have been used for hundreds of years, a number of developments have caused them to assume a position of increasing prominence as objective aids to instruction. Among these developments are (1) improved techniques of map making, the more effective use of color, the introduction of various types of projection, (2) development in transportation and communication extending national boundaries to encompass the world in trade, commerce, and social welfare, and (3) the increasing use of maps in the current literature of the world.

The effective use of maps as objective aids in junior high school instruction is intimately related to the ability of pupils to read them. This involves an appropriate use and interpretation of scales, legends, colors, longitude and latitude, and types of projection.

Any attempt to represent a large portion of the earth's surface in a plane results in inaccuracies and distortions. Techniques used to lessen these distortions are called "projections," as, for example, orthographic, stereographic, Mercator, globular, homolosine. Each type of projection is intended to be the best for a specific purpose, but each has its unique limitations. If pupils are to read and interpret maps correctly, they must understand the purposes, the inaccuracies, distortions, and limitations characteristic of each type of projection.

Not infrequently map makers use contrasting colors to present two or even three types of data on the same map. Sometimes this is done to economize and sometimes to show relationships.¹ When

¹ An example of this usage is J. Paul Goode's *Political-physical Map-slides*, Keystone View Company, Meadville, Pa.

such maps are used, it is essential that pupils understand the purposes of the colors

The most effective way to teach pupils properly to understand the distortion of flat maps and correctly to understand area and distance relationships is by means of continuous reference to the globe which is the only exact graphic presentation of these relationships

Equipment Facilitating Group Uses of Graphic Materials—The effective use of graphic materials in modern education requires suitable means of adapting them to group instruction. The most essential equipment for this purpose includes the blackboard, bulletin board, opaque projector, stereopticon slide projector, stereopticon map slides, school made stereopticon glass slides, and projection screens

BLACKBOARD—In the presentation of graphic materials to groups, the classroom blackboard may be used advantageously to develop a map diagram, chart, or graph, to show techniques of construction and interrelationships during stages of construction. The blackboard may also be used as a projection screen upon which stereopticon slides may be shown when supplementary or developmental materials are to be added by the group

BULLETIN BOARDS—Two kinds of bulletin boards are needed to display graphic materials in junior high schools. Classroom boards are needed to display materials being used by a group, and hall boards are needed to display posters, specimens of pupil work, and other graphic materials of general interest

OPAQUE PROJECTOR—The opaque projector enables teachers to project images of nontransparent or opaque graphic materials, even when these are bound in magazines or textbooks. Because opaque projection is accomplished by reflection through a series of mirrors, much light is lost, and hence a relatively dark classroom is needed. Nevertheless, the opaque projector is useful in presenting current materials to a group

STEREOPTICON SLIDE PROJECTORS—Stereopticon slide projectors are used with stereopticon map slides and school made stereopticon slides to present graphic materials. This equipment is described more fully in the next section

Still Pictures—Today the use of pictures is becoming increasingly popular in many fields, particularly in advertising, journalism, science, and education. The unprecedented current use of pictures is caused in part by improved techniques of photography and pro-

duction, with tremendous increases in the number of superior pictures, and in part by a wider recognition of the value of pictures as a supplementary medium of communication. The power of photographic prints to supplement, clarify, or emphasize aspects of verbal descriptions is too well known to need mentioning. But the specific characteristics of pictures from which they derive their power and the specific applications of pictures as objective aids to instruction are less well known. These factors are of importance to teachers as a basis for the selection and use of pictures in the classroom.

Characteristics of Good Pictures—The value of still pictures as objective aids to instruction in large measure is derived from certain characteristics that enable them to reveal truth through high photographic quality and technique.

Good pictures portray a single story clearly and accurately with an appropriate representation of the size and proportion of unfamiliar objects in relation to familiar or commonly known objects. Obviously, then, good pictures must be relatively free from inaccuracies, distortions, misleading illusions, and distracting stimuli. A picture used to show a type or classification should be truly representative, and the nature of the picture should be made clear in the accompanying legend.

The vividness and clarity of the true story portrayed by pictures vary with their photographic quality. Good pictures have proper light exposure, good focus, a clear, distinct center of interest against subordinated background, detail, implied action or arrested life, and illusions of depth and perspective.

The Value of Color in Photographs—Recent developments in color photography have made possible photographic reproductions that closely approximate the true colors of the original scene. With certain units of study and for certain instructional purposes, natural-color photographs are distinctly superior to black and white photographs in that they more nearly approximate reality. Undoubtedly true color is highly valuable in the study of flowers, birds, Indians, national costumes and flags, and other fields of study where color plays an important role. For other units and purposes color contributes little to the instructional value of the picture. Such fields are communication, manufacturing, national resources, methods of travel, and some animal life. Color photographs are considerably more expensive than others, and true approximations of natural color are difficult to obtain in variety.

It is likely that in the use of a group of photographs in a unit of study the essential color concepts built by a few well-colored photographs will carry over into the materials of other photographs when they are used

The Use of Still Pictures —The instructional value of pictures in large measure depends upon how they are used. The study of each picture should show the relation of its content to the problem being studied and to previous experiences of the pupils. The various relationships within the picture should be explained to assure a correct interpretation of objects, size, proportion, and function.

The number of well-selected pictures that should be used at one time will depend upon the purposes for which they are being used and the relevancy of the pictures themselves. Several pictures pertinent to a unit of study properly may be used for purposes of introduction, summary, review, comparison, continuity, and a study of relationships. Usually one or a very few pictures are needed in a more detailed study of part of a unit or of a specific problem. The various relationships within it need to be explained to assure a correct interpretation of object, size, proportion, and function.

The Advantages of Still Pictures —In their role as objective aids to instruction, still pictures of all types possess four distinctive advantages over other types of instructional aids. These advantages are time for study, availability, specificity, and simplicity.

TIME FOR STUDY —Still pictures may be studied for as long a time or as frequently as may be needed to show the relation of the content to the problem under study and to previous experiences of pupils.

AVAILABILITY —The large supply and low cost of good still pictures give them an added advantage. With little effort or cost, any teacher and any school may build a collection containing high-quality pictures that are pertinent to most units of study. The wide availability of still pictures permits freedom of selection to fit individual classroom needs.

SPECIFICITY —The narrow scope of the content of still pictures makes possible an accurate selection and use of materials that fit a particular need without introducing content that is irrelevant and distracting.

SIMPLICITY —The simplicity and ease with which still pictures may be used in the classroom promote their wide and frequent use. They may be used without interrupting school schedules and pro-

cedures and without special equipment. The simplicity and availability of pictures facilitates their use at the proper psychological moment, as determined by the needs of the pupils.

Prints—Photographic prints are the most available and, in some forms, the least expensive of all types of objective aids. They are obtained in the following forms: pictures in texts, pictorial encyclopedias and other books, magazines, mounted and unmounted pictures, advertising posters and circulars, and reproductions of masterpieces of art.

In recent years, there has been a decided increase and improvement in the use of pictures in textbooks. One important criterion for evaluating textbooks for use at the junior high school level is the number, quality, and appropriate uses of pictures in these books. Teachers should be conscious of the fact that pictures are an integral part of textbooks and should make proper use of them. The pictures of excellent quality that are available in various supplementary books, including children's pictorial encyclopedias, furnish valuable aids to teaching in practically every unit of study. The increase in the use of pictures in magazines, newspapers, advertising posters and circulars furnishes another almost inexhaustible source of materials. Good prints are available on a variety of subjects from various commercial organizations, either in mounted or unmounted forms. The improvement and the popularization of the camera has resulted in excellent amateur photography that provides valuable instructional material as well as valuable educational experiences. Such activities are frequently supplemented by the organization of camera or photograph clubs as extraclass activities of the junior high school.

Prints secured from old magazines, advertising posters and circulars, and similar sources should be mounted, catalogued and filed according to units of work if they are of such a nature as to be of future value. Many teachers find it advantageous to build their own individual classroom files of mounted prints.

Frequently, excellent well illustrated articles on subjects applicable to junior high-school work appear in pictorial magazines such as the *National Geographic Magazine*. Often these articles are of lasting value for the study of certain units. Many schools have found it advisable to separate these articles from the magazine and staple them into individual booklets with art construction paper as covers. These are then catalogued and filed in the library as illustrated booklets.

In order that teachers and pupils may have adequate opportunity for the study of masterpieces of art, many schools have obtained relatively inexpensive reproductions of these masterpieces. These can be framed inexpensively by industrial arts classes or by the central maintenance shop of the school system. They are then catalogued, filed, and made available, some in the local school library and other more expensive ones in the "visual" center of the school system. Teachers may obtain these masterpieces as they are needed in the classroom.

The bulletin board, opaque projector, and projection screen may be used to adapt photographic prints to group instruction.

Stereographs and Stereoscopes —The normal eyes of human beings are simultaneously focused upon an object. Because of the fact that our eyes are separated and each is focused at a slightly different angle upon an object, there is formed upon each retina a slightly different image. By means of these two images, we are able to see depth better. This ability to see depth is one of the principal advantages of two eyes.

The stereograph is the most realistic of all still pictures, because it gives the illusion of depth when viewed through the stereoscope. The stereograph consists of two pictures of the same scene taken at slightly different angles and mounted adjacent to each other on a cardboard. These pictures are photographed by a stereoscopic camera, which is in reality two cameras mounted at slightly different angles, with their lenses $2\frac{1}{2}$ inches apart, the approximate distance between the eyes. By means of this camera two photographs of the same scene are taken simultaneously.

The stereoscope is a small apparatus for viewing the stereograph. In addition to enlarging the picture, it enables an individual to focus the left eye on the left picture while the right eye is focused on the right picture. As a result of viewing the stereograph through the stereoscope, images of the two slightly different pictures are formed upon the respective retinas. Thus the stereograph gives the illusion of perspective that is so essential to reality. An elaborate type of stereoscope called the "telebinocular" is sometimes used. In this type the stereoscope is more substantially built, mounted upon a metal base, and provided with a small electric light for illuminating the stereograph.

THE VALUE OF THE STEREOGRAPH —The stereograph and stereoscope, invented in 1832, were greatly improved and popularized by Oliver Wendell Holmes around 1860. The stereograph was intro-

duced into schools for instructional purposes shortly before 1900. Although it had considerable popularity at this time, its proper use and real value were understood by few people. Furthermore, much of the content of the materials became obsolete, and many collections of stereographs were left unused in school storerooms. With the advent of the motion picture, so much attention was given to it and to another new development, the film slide, that little further thought was given to the value of the stereograph for instructional purposes. However, in recent years, with a new realization of the value to instruction of all types of objective aids, the stereograph has reached more nearly its rightful place of preeminence among all still pictures.

The stereograph is of greatest value in the elementary school, where the experiences of pupils are most limited. These experiences may be broadened readily through the realism afforded by the stereograph. However, the stereograph should occupy an important place among objective aids in the junior high school and in the senior high school as well. Junior high school pupils need to develop many new concepts and to recall past experiences and make them more vivid. In many fields this may best be done with the stereograph.

TECHNIQUES IN USE OF STEREOGRAPHS—The stereograph is fundamentally an individual aid to instruction. Some attempts to adapt it to group use have resulted in inattention, confusion, and poor teaching. The stereograph should be used as a study or preparation aid somewhat in the same manner as encyclopedias and other reference materials. A wide variety of high-quality stereographs suitable for almost every unit of study in the junior high school is available. These are available either in black and white or in true colors. A few stereoscopes may be provided on the study table in the classroom, along with the particular stereographs that contribute to the unit of study under consideration. Individuals and small groups may study these stereographs in their search for material pertaining to specific problems. Many schools have used the plan of providing collections of stereographs and stereoscopes in the school library. Here pupils may use them in the same way as they use other library materials. A successful way of adapting these materials for group discussion is by means of a glass slide reproducing either picture of a stereograph. Thus materials that have been studied by individual pupils through the stereograph may be projected upon the screen for group study.

Glass Slides—The use of still pictures of all kinds is limited largely to individual study, but for greatest effectiveness these need to be adapted for group study and discussion. Glass slides make possible the transparent projection of various types of pictorial and graphic material.

Many school systems have a photography department transfer materials that are not copyrighted to glass-slide forms. This practice, however, is limited by lack of reproduction facilities and by the variety and scope of materials. A wide selection of glass slides produced for specific instructional values on almost every unit of study at the junior high-school level may be purchased from commercial concerns at nominal prices. Thus instructional materials needed in English, foreign languages, social studies, art, industrial arts, science, music, household arts, and health and physical education are available through glass slides. These materials may be in the form of various types of maps, pictures, songs with the accompanying music, charts, graphs, and cartoons. Of particular interest, for example, is the new map slide¹ that vastly increases the group study of maps. These map slides may be projected on the blackboard and the maps further developed by the class.

The standard size for glass slides is $3\frac{1}{4}$ by 4 inches. Although these have been used almost universally, the popular 35-millimeter still picture camera is being used to make 35-millimeter slides.

School-made Slides—An important new development that is gaining increasing popularity is the school made glass slide. Glass slides may be constructed by pupils and teachers without the use of photography. Such slides possess the advantage of economy and adaptability to classroom needs, and they have the added educational value of other forms of creative expression.

Various materials and techniques may be used in the construction of school made slides. Among the more useful are (1) Cellophane with typewriter, (2) Cellophane with India ink, (3) plain glass with lantern-slide ink, (4) etched glass with lantern-slide ink or crayon or with ordinary graphite pencil, and (5) Cellophane of various colors made into pictures.

Artistic and resourceful teachers find many interesting and novel combinations of these materials and techniques. Descriptions of materials, directions for making, and suggestions for using school made slides are found in various publications.²

¹ Keystone View Company, Meadville, Pa.

² *How to Make Handmade Lantern Slides*, p. 13, Keystone View Company.

Projection of Glass Slides—Important in the use of glass slides is the manner of projection. Much of the instructional value of glass slides is derived from superior projection. With a good projector, clear, distinct images in black and white or in color may be projected on a screen even in a relatively light classroom. In fact, when windows are on the shady side of the room, clear 3- or 4-foot images may be projected without drawing any shades.

Film Strips—Another means for transparent projection of still pictorial and graphic materials in group instruction is the film strip which is a roll of film consisting of about thirty "frames" usually 35 millimeters in width but occasionally the width of standard glass slides. Originating as an outgrowth of the early silent motion picture, the film strip has received wider use with the development of miniature still picture cameras using 35-millimeter motion picture film.

The film strip is most useful when a series of pictures or graphic materials are needed in a sequence for continuous development or contrast or for purposes of introduction, review, and summary of a unit of work. It is especially adapted for pupil-teacher production of films that record excursion experiences for future class discussions. As compared with the glass slide, the film strip is less expensive, smaller, unbreakable and is more easily transported.

Frequently the predetermined sequence of materials in a film strip handicaps freedom in the selection of material to fit the specific needs of a class. Often the sequence required for one class is not suitable for another class studying the same unit of work. Because the film strip is smaller and less transparent than the glass slide, a darker room is required for projection.

For the projection of the 35-millimeter film strip, a special projector may be used, or an attachment may be fitted onto the regular glass-slide projector. A special slide carrier may likewise be used with the glass-slide projector for wide film strips.

Motion Pictures—The enormous influence that theatrical motion pictures have exerted upon the attitudes, habits, emotions and behavior of children and adults is widely recognized. A survey

of the effect of this influence is presented in the *Payne Fund Studies*¹ Recently the influence of motion pictures in education has been receiving greater recognition

Stereographs were found to occupy a place of unique importance in the field of objective aids because of their peculiar technical advantages, which make them a means of furnishing an appearance of reality through depth In a similar manner, motion pictures hold a place of preeminence among objective aids to instruction because of their peculiar technical advantages, which make them a unique means of presenting effectively instructional materials in the classroom

Technical Advantages—The peculiar technical advantages of motion pictures are

- 1 Depicting continuity of actions processes and events²
- 2 Depicting naturally observable actions and processes²
- 3 Revealing naturally unobservable actions and processes²
- 4 Reproducing sounds synchronized with accompanying actions

DEPICTING CONTINUITY OF ACTIONS, PROCESSES, AND EVENTS—Various forms of pictorial materials, such as prints, stereographs, glass slides, and film slides, may be arranged in sequence to show continuity in the development of processes as well as to show a continuous story of a series of events However, continuity of actions and processes and the complete story of a series of events, involving various interrelationships, can best be shown by the action and smooth flow of the motion picture

DEPICTING NATURALLY OBSERVABLE ACTIONS AND PROCESSES—"Naturally observable" actions and processes are those that can be seen by ordinary observation These are the actions usually found in theatrical motion pictures This type of depiction is the principal reason why motion pictures give impressions of reality

REVEALING NATURALLY UNOBSERVABLE ACTIONS AND PROCESSES—"Naturally unobservable" actions and processes are those that cannot be seen by ordinary observation New ways of depicting otherwise unobservable actions and processes have been developed largely by efforts to adapt the motion picture to instructional uses

¹ CHARTERS W W (chairman) *Motion Pictures and Youth A Summary* Payne Fund Studies The Macmillan Company New York, 1933

² Adapted from a statement of the functions of motion pictures by HOBAN, CHARLES F HOBAN CHARLES F JR. and ZISMAN SAMUEL B, *Visualizing the Curriculum* The Dryden Press Inc New York 1937

Through these new technical inventions, the motion picture furnishes many new experiences not possible in ordinary life, or even, heretofore, in the science laboratory. Thus the young child may be provided with information and experiences that not even the most learned scientist could have without the motion picture. These new techniques used in presenting otherwise unobservable actions and processes include "animation, slow-motion photography, time-lapse photography, microphotography, and miniature photography."¹

1. Animation.—One type of animation has been popularized by Walt Disney's creations of *Mickey Mouse* and *Snow White and the Seven Dwarfs*, reaching a pinnacle of development in *Fantasio*. This type of animation is seldom used for instructional purposes.

The animation of diagrams and charts, however, has opened new and rich instructional possibilities for the motion picture. Through this technique we are able to present diagrams and charts of various processes in action that could be presented before only by word descriptions and partially by still pictures. Similarly, the physically hidden inner processes, actions, and interrelationships of complicated manufactured mechanisms and of plant and animal life are revealed on the screen through a combination of cross-sectional animated drawings and pictures synchronized with expert oral descriptions and in some instances accompanied by natural sounds.

Extensive and exceedingly valuable applications of this technique in the production of motion pictures for instructional use have been made by Erpi Classroom Films, Inc., in collaboration with leading specialists in various fields.

2. Slow-motion Photography.—Slow-motion photography makes observable motions that are too fast for the human eye to see. Thus we may observe the movement of the wings of birds and insects in flight or while poised in the air, the whirl of airplane propellers, the movements of parts of speeding automobiles or other fast-moving machinery to discover imperfections and relationships. Slow-motion photography also makes possible the observation of details in many movements that can be observed only in gross without slow-motion photography, as, for example, in the movements of wild animals, dancing, running, jumping, activities in football and basketball. Thus, in various ways, slow-motion pictures have found a place of importance in instructional activities.

¹ *Ibid.*, p. 102.

inextricable part, the sound motion pictures are advantageous in some of these situations. Frequently, in presenting complicated processes and situations, expert verbal descriptions and direction of learners' attention need to accompany the pictorial or graphic material. By means of the sound motion picture, such expert verbal descriptions may be oral and well synchronized with the pictorial presentation.

In less technical situations, it is frequently best for the teacher to present the verbal descriptions and directions along with the picture. In these situations, the teacher may adjust his descriptions to the particular needs and the level of the group when the silent motion pictures contain a relatively small amount of printed materials. If a sound motion picture is used, the teacher may turn off the sound and give his own verbal descriptions and directions.

In some situations, relative cost and ease of operation are practical factors in deciding whether to use silent or sound motion pictures. Silent films and projectors are less expensive than sound equipment, and silent projectors are less complicated and are easier to operate than sound projectors. Even so, teachers need to be familiar with the operation of both silent and sound projectors.

Educational Advantages of Motion Pictures—Certain technical advantages of motion pictures make them particularly well suited to aid instruction by previewing problems or units of work, arousing interest, furnishing continuity in materials, demonstrating processes, dramatizing processes or events, explaining relationships, and summarizing units of work.

Thus, by virtue of its peculiar technical characteristics, the motion picture enables the teacher to arouse interest in a new unit of work through a rapid preview. This same film may be used to demonstrate processes and show relationships through its continuity of action. It may be used further to dramatize processes and events and thus develop attitudes and appreciations. Finally, the motion picture may be used in building thorough understanding through summarization.

School-made Films—Efficient, small, and easily operated motion-picture cameras are available today at reasonable prices. Motion-picture films may be purchased, developed, and printed at relatively low cost. Many schools and individual teachers have been quite successful in producing educational films. These films may be

used in the following ways (1) to interpret the school to the public; (2) to make available for instruction in classrooms materials found in the local community, and (3) to preserve in pictorial form for the archives and for instructional use outstanding dramatic performances, pageants, field or athletic events, exhibitions of pupils' work, and successful teaching procedures

INTERPRETING THE SCHOOL TO THE PUBLIC—Basic problems of interpreting the schools to the public are discussed in Chap. XVI. Here we need only to point out that school-made motion-picture films provide an objective way of presenting to the public various classroom activities and procedures, materials constructed by pupils, pageants, and other dramatic performances. These films may also show the type and condition of school sites, buildings, and equipment, how and where capital outlay has been expended, and whether additional expenditures are needed. Many schools have made films of this type that were not only highly informative and interpretive but that portrayed dramatic and personal elements of much appeal to the public. Frequently such films are in much demand by community organizations.

MAKING AVAILABLE FOR INSTRUCTION IN CLASSROOMS MATERIALS FOUND IN THE LOCAL COMMUNITY—School-made films may be used to supplement excursions. Motion picture records of observations made on excursions may be projected on the screen for more detailed study and class discussion. Natural physical characteristics and various activities, products, and processes in the community may be filmed for instructional use.

PRESERVING IN PICTORIAL FORM FOR THE ARCHIVES AND FOR INSTRUCTIONAL USE OUTSTANDING DRAMATIC PERFORMANCES, PAGEANTS, FIELD OR ATHLETIC EVENTS, EXHIBITIONS OF PUPILS' WORK, AND SUCCESSFUL TEACHING PROCEDURES—The films used for interpreting the schools to the public may serve as valuable records for the school archives. Pupils are thrilled by seeing themselves and their schoolmates on the projection screen. Presenting various school activities on the screen contributes much to building school loyalty and morale. Such films also have current and future instructional value. Many school-made films involving teaching procedures have value in improving instruction. Teachers may study their own procedures to discover ways of improvement, or highly successful procedures may be shown to teacher groups as examples. Good commercial examples of teacher-training films may be used as patterns for the filming of school-made films of

this type. Such commercial films are being produced increasingly by Erpi Classroom Films, Inc.¹

Size and Projection—Early educational films were 35 millimeters in width, which is standard for theatrical films. Today, practically all educational films are 16 millimeters in width. Since there is a direct relationship between width and length of films, materials requiring 1,000 feet of 35 millimeters may be reproduced on 400 feet of 16 millimeters. Because of this difference in size, the 35-millimeter films are more expensive to transport, cost more to purchase, and require larger, more complicated, and more expensive equipment for projection than the 16-millimeter films. The 35-millimeter films are frequently made of inflammable stock and require fireproof hoods. The 16-millimeter films are always made of noninflammable stock and therefore do not require hoods for projection. The 16-millimeter films are quite satisfactory for school uses in classrooms and average-sized auditoriums. Good projection screens are required, and rooms need to be darkened for projection of any type of motion-picture film.

Several makes of good projectors for either silent or sound films are available at various prices. Among the factors, other than price, that should be considered in purchasing projectors are portability, durability, simplicity of operation, devices for reversing the projector so as to reshow portions of the film for more intensive study of relationships, the quality of projection, the quality of sound reproduction, and the quality of service provided by distributors for projectors in use. In addition to these factors, there are other factors related to the proposed uses of the projectors. These are size and volume of projectors and focal length of lens.

Instruction in Motion-picture Appreciation—Throughout the present discussion of junior-high-school education, it has been repeatedly emphasized that the responsibility of the school extends beyond the classroom into every aspect of community life. Modern schools are attempting to teach pupils how to live in the community, how profitably to utilize its resources, and how to build a better community.

Since theatrical motion pictures are greatly affecting the attitudes, habits, emotions, and behavior of children and adults, it is necessary for schools to instruct pupils so that they may receive

¹ Erpi Classroom Films, Inc., Long Island City, N. Y. See, for example, *Teaching with Sound Films*, *Dynamic Learning* (produced in collaboration with W. H. Kilpatrick), *Individual Differences in Arithmetic* (produced in collaboration with G. T. Burwell).

the greatest possible benefit from theatrical motion pictures. This instruction involves (1) helping pupils choose the best pictures and (2) helping pupils understand and appreciate theatrical motion pictures. Some effective work has been done in teaching motion-picture appreciation, but this practice should receive more widespread attention and application.

In recent years, the motion picture industry has produced many excellent theatrical films of high educational value in various fields and types of learning, such as fine arts, literature, history, social problems, and sciences, including the development of the scientific method. For a good many years, even elementary schools have attempted to teach pupils to solve problems by the scientific method. This is indicated by such terms as "problem method," "project method," and "activity program." Schools have also taught pupils about the great contributions to civilization made by scientists throughout history, emphasizing the methods employed, the hardships, discouragements, and ridicule that they were forced to overcome. Other efforts of the schools have been greatly facilitated by several recent theatrical films that depict the scientific attitude and method. Examples are such films as *Arrowsmith*, *The Citadel*, *The Story of Louis Pasteur*, *Edison the Man*, and *Doctor Ehrlich's Magic Bullet*. The drama inherent in the development and application of the scientific method as portrayed in these films has contributed to making them box-office attractions.

Although most of the educational value of these films in depicting the scientific attitude and method may be lost to pupils of junior-high-school age, this would not be true if schools fulfilled their responsibility of helping pupils understand and appreciate theatrical motion pictures. When more effective work is done by schools in helping pupils select, understand, and appreciate good theatrical films, it is reasonable to expect that more of the negative educational results of harmful theatrical films will be avoided.

Techniques in Use of Motion Pictures—Although motion pictures have value for entertainment and for use of leisure time, we are concerned here with techniques in the use of motion pictures as aids to instruction. Since they are aids, their use for instructional purposes involves far more than just showing pictures. Careful planning by the teacher and much preparation and study by pupils are necessary for the best results in the use of films.

Films should be selected to fit the particular needs of the class, just as other instructional materials are selected. This means that

they must be adapted to the unit of work and to the needs and level of ability of the particular group. If the teacher is not already familiar with the contents of the film, he should carefully preview it, noting contents, relationships, and essential points to be observed by pupils. A brief statement of contents and points to be observed may be presented to the pupils in advance. The time of showing the film will be determined by the needs of the class and by the contents and nature of the film. Some films need to be shown many times, either as a whole or in parts. Such films may be needed both as a preview and as a summary of a unit of work, and some portions may need to be shown many times throughout the unit for purposes of clarifying and showing relationships. Teachers should check pupil observations and understandings by discussions and tests. Because motion pictures are used as aids to instruction, the techniques for their proper use are like the general techniques for effective instruction.

Projection Screens—Adequate group use of objective aids to instruction requires the projection of opaque materials, glass slides, film strips, and motion picture films. The quality of projection depends upon (1) the amount of light in the room, (2) the quality and wattage of the projector, (3) the quality of the projection screen, (4) the relative position of the pupils and screen, and (5) the relative positions of the projector and screen.

The line of vision and the line of projection should be as nearly as possible perpendicular to the screen. When the line of vision meets the screen at too oblique an angle, the pupil cannot see a clear, distinct image. When the line of projection meets the screen at an oblique angle, the area of projection is skewed from its rectangular shape, and portions of the picture become distorted. In order to get the best quality of projection, screens should be placed on an end wall slightly above the level of the pupils' eyes and at about equal distance from each side of the room. The projector should be placed approximately level with the center of the screen. The line of vision needs to be more nearly perpendicular to the surface of the screen in using beaded aluminum surface, or translucent screens than in using other types of screens.

The size of the screen needed will depend upon the distance of the pupils from the screen and the amount of light in the room. In most classroom projections, the screen image will be from 3 to 4 feet in size. In classrooms that cannot be darkened the size of the screen image may be lessened to increase the brilliancy.

The price of projection screens varies with the material, mountings, and size. Some schools have made satisfactory opaque screens at low cost by attaching to window-shade rollers heavy window-shade material of white or light cream color. These screens are then mounted on a narrow wooden backboard provided with eyescrews for hanging. Portions of classroom walls finished in smooth plaster with flat white paint serve as good screens when they are in the right positions. Good translucent screens may be made inexpensively by mounting a framed piece of dental rubber or draftsman's tracing cloth on a small adjustable tripod or stand.

Dramatizations.—Dramatization offers many possibilities as an objective aid to instruction. The forms of dramatization suitable to the junior high school include pageantry, short plays, literary selections, historical events and movements, style shows, vaudeville, musical and dancing skits, and puppetry. On a small scale, these are adapted to classroom use as aids to instruction. They may be applied on a larger scale for school assemblies. These assembly dramatic performances should be outgrowths of classroom instructional activities. Large-scale pageantry involving the cooperative efforts of the entire school may be successfully staged as a summary of units produced in various classroom activities. Thus each department may have definite responsibilities to perform as a part of its instructional program. Physical-education classes may develop the dancing activities of the performance; English classes may assume the responsibility for effective speech work; industrial-art classes may prepare electrical effects and construct scenery; art classes may furnish advertising posters, make scenery projection slides, and paint stage scenery; household-arts classes may create costumes; music classes may provide instrumental and vocal music; and typing or printing classes may provide attractive mimeographed or printed announcements and programs.

Dramatic performances produced cooperatively vitalize classroom instruction and correlate the various instructional activities of the school. Much of the interruption of the instructional program that frequently accompanies large-scale dramatic performances is thus eliminated, and more pupils share in the educational benefits of the performance. Selecting a few talented pupils to participate may result in a superior production with greater promotional benefits to the school, but this practice too frequently sacrifices many of the instructional values. Schools should maintain high standards of accomplishment in all dramatizations.

Not only do these high standards increase the instructional value but they make such pageantry and dramatizations one of the most effective ways of interpreting the schools to the public

The success of many assembly dramatizations depends largely upon the costuming, which is usually the most expensive part of school dramatics. Creating all the costumes for a large-scale pageant is too much responsibility for household art classes as a part of their instructional program. Many schools have found it advantageous to maintain a costume collection. The household arts department assumes responsibility for the care and maintenance of this collection and adds to it when the need arises. In addition to the costume collections in the local schools, many school systems maintain a costume department in their "visual" centers. Costumes from this department are loaned to local schools to supplement their local supply. Such central costume collections were increased recently in some school systems by the use of dressmakers and other artisans made available through Federal work-relief programs.

Microprojections—Several types of science apparatus assist in making instruction more objective through demonstrations. Prominent among these is the microprojector, which projects on a screen the image of microscopic substances. This apparatus adapts the microscope to group use. It is of special value at junior high-school level because of the difficulty pupils of this age experience in operating microscopes. Ordinarily it is difficult for teachers to know that pupils see what is being studied. With the microprojector, this difficulty is eliminated since an image of the substance under study is projected on the screen for class discussion. Special types of microprojectors project images of live microscopic substances for observation of activity in the materials.

Special demonstration equipment of this type is so expensive that individual schools often cannot afford an adequate selection. Hence some school systems maintain a collection of such apparatus in the "visual" center. This equipment is loaned to schools as needed.

Electrical Recordings—Increasing importance is being accorded to electrical recordings as objective aids. Formerly these were considered most useful in the development of music appreciation, now they are found of value in many areas of learning. Thus, for example, English classes may hear the voice of contemporary poets whose recordings make the study of poetry of living interest. Physical-education teachers find that records aid instruction in

dancing, group games, and formal exercises. They may also provide rhythm and timing for typing and penmanship activities and for extraclass recreational activities such as social dancing. Many junior high schools are using school made records to improve the speech habits of pupils. Electrical recordings enable pupils to hear and analyze their own voices and correct their speech errors.

The phonograph has further educational value as a means of adapting radio broadcasts to wider classroom use. Frequently broadcasts of high instructional value in various departments of the school occur at times unsuitable for school use. Electrical recordings of these broadcasts made by the school make them available for classes as needed. These recordings have the additional advantage of allowing time for study and discussion.

Small portable efficient phonographs are available at low cost. For a small additional cost, public address or microphone attachments may be purchased. These public address systems are of much value, although they are limited in volume and have only one loud speaker.

To realize the fullest benefits from electrical recordings, individual schools should have recordings and portable phonographs in sufficient numbers to satisfy their needs. These are made available from the library to teachers as are other instructional materials.

Radio Broadcasts—The radio is another development that is exerting enormous influence upon the attitudes, habits, emotions, and behavior of children and adults. Like motion pictures, it must be regarded as a valuable educational instrument.

One of the great difficulties in the use of the radio as an objective aid to instruction lies in the fact that broadcasting time is expensive and is therefore purchased to a considerable extent by commercial concerns for advertising purposes. Thus schools are limited largely to the programs that are considered by these concerns to have the greatest public appeal. Although many commercial programs have high instructional value they are frequently broadcast at times unsuitable to classroom use.

Notwithstanding these difficulties schools are making considerable use of the radio. Various types of broadcasts that have instructional value are heard directly by classes. Broadcasts of special value include various types of musical programs, group and individual discussions on current social, political and economic problems, news reviews and comments, and dramatic performances.

through a committee of pupils and teachers under the chairmanship of the librarian

Cataloguing—As objective aids are collected and referred to the library, they must be carefully classified according to instructional purposes, and mounted or otherwise prepared for preservation and use. They must also be described with individual legends, catalogued, and filed. All these are technical aspects of the newer duties of the school librarian.

Graphic materials, stereographs, and ordinary prints may be filed in the reference room of the library. Museum materials should be housed in a separate room of the library unit. Other objective materials and equipment such as large art masterpieces, films, film strips, electrical recordings, and glass slides, together with projectors, phonographs, and radios, should also be housed in a separate room of the library unit, since these are to be used in classrooms and not in the library unit.

Centralizing Objective-aid Centers—When the educational philosophy that places objective-aid material in the school library under the direction of the librarian is related to the entire school district, the need for a coordinating center becomes apparent.

A number of outstanding school systems have created "visual" centers, and some have coordinated these with the library. The function performed by these central offices is essentially the same as that of the local school library, namely, collecting, preparing, classifying, cataloguing, housing, and circulating objective-aid materials so that these are available and accessible to the greatest number of teachers. Further functions of central objective-aid centers include coordinating material of local centers, caring for and maintaining the equipment, constructing, and purchasing both materials and equipment for the entire system.

The objective-aid center for the school system is in a strategic position to contribute uniquely in several ways to this phase of the school program. It may organize a photographic studio to make glass slides, film strips and photographic prints, and to mount prints and graphic materials, as well as to photograph interesting aspects of school and community life. It may organize a construction, care, and maintenance division. To supplement this work, a great many school systems recently have taken advantage of the Federal works relief programs to secure the skilled services of artists, taxidermists and other craftsmen in building useful exhibits such as bird- and animal habitat cases, unit models portray-



A visual center workshop (Photograph courtesy of public schools Berkeley Calif)

ing the evolution of American transportation, communication, architecture, manufacturing processes, and other aspects of our industrial and social heritage

From the point of view of administration, all school-owned objective aids should be considered the property of the school system, and hence these should be accessioned and then issued to local schools just as other materials are issued. The more basic, fundamental, or frequently used objective aids and equipment should be housed in local schools. Materials and equipment that are housed in the central office should supplement those in the local school.

Many small school systems have not established objective-aid centers. However, an interesting recent trend is the cooperative development of adequate centers by several districts or entire counties. Where no central service is provided, teachers may refer to city, county, and state libraries, to museums, and to county, state, and Federal bureaus and agencies for needed objective materials.

SUMMARY

Objective aids to instruction include all objective symbols that portray characteristics similar to the real objects, processes, and relationships for which they stand. The unique characteristics of various types of objective aids enable them to contribute to specific instructional functions, and hence selectivity in the use of objective aids becomes the first principle governing their application to school procedures. Selecting the most appropriate types of instructional aids implies a familiarity with the characteristics, techniques of use, advantages, limitations, and sources of each type. Since no single objective aid can accomplish all instructional purposes, it is often necessary to use several types in a single unit of work.

It is a definite responsibility of the junior high school to develop an appreciation of theatrical motion pictures and public radio broadcasts.

Developing an adequate supply of carefully selected objective aids requires the cooperation of everyone in the school. Contributions of individual pupils and teachers should be coordinated through committees under the school librarian.

Administering objective aids throughout the school system requires coordination among all the schools of the district. This coordination may best be accomplished through a central objective-

aid center under the supervision of the central librarian for the school system, assisted by technical experts. All objective materials and equipment in local schools should be considered the property of the school district. Teachers should become familiar with all agencies circulating objective aids, and they should know what aids are available from each source.

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CHAPTER XII

APPRAISING AND REPORTING PUPIL PROGRESS

The systematic educational growth of pupils in junior high school does not result from the combination of chance factors in the classroom. Systematic progress results only from intelligent planning, based upon a knowledge of the present educational status and needs of pupils. Such knowledge may be gained only through some form of measurement or appraisal of pupils. Certain measuring instruments and appraisal devices that are useful in junior high school are discussed here, along with methods of reporting pupil progress.

MEASURING INSTRUMENTS AND APPRAISAL DEVICES

Various tests and examinations, either formal or informal, oral or written, are used consistently in all educational work as a complementary aspect of instructional procedures. Until recent times, the traditional written-essay examination was the most widely used type of examination. Comparatively recent advances in the field of educational measurements have emphasized the characteristics of good examinations and have popularized a number of newer types.

There are two characteristics that contribute to the value of all examinations. All good examinations possess a high degree of validity. This means that they measure adequately the knowledge, ability, skill, or quality that they are supposed to measure. Calling an examination by a suitable name does not ensure its validity. The validity of an examination may be determined by reference to some outside criterion or to the pooled judgments of competent experts. All good examinations possess a high degree of reliability. This means that they measure consistently whatever they do measure. An examination that yields variable results when it is given a second time to a group of pupils is an unreliable test. The reliability of a test is affected by the objectivity of scoring, which reduces to a minimum both the writing required by pupils and the subjective judgments of teachers who are scoring the test. Scoring an examination objectively involves the use of a

previously prepared standard criterion or keys distinguished from scoring done by subjective estimates that are influenced by such irrelevant factors as the quality of handwriting, general neatness, linguistic style and facility, and by various personality characteristics of identified examinees. The reliability of an examination is affected further by the adequacy with which the test samples the quality, ability, knowledge, or skill being measured. The results of good examinations are assumed to be proportionate to true measures of pupil abilities, knowledges, or skills in particular areas of experience. A narrow, restricted sampling of a given field is likely to be less representative of the true qualities and abilities than is a more extensive or more comprehensive sampling of that field. In general, the reliability of an examination increases with the adequacy of sampling and with the objectivity of scoring.

Standard Tests—*Standard tests are formal measuring instruments that provide a standard means for measuring various aspects of pupil abilities, achievements, and personalities.* Not only do well-constructed standard tests possess a high degree of validity and reliability but also they have been constructed scientifically by experts who have subjected preliminary forms of tests to experimental conditions and subsequent revisions. Standard tests are published with norms that may be used to interpret and to evaluate individual scores and group scores obtained from the test. In addition, the standard test is published with specific directions for administering, scoring, and interpreting the results, as well as descriptions of the purposes of the test, the conditions under which it should be administered, and the time limitations.

Standard tests have proved useful in administrative procedures involved in the grouping and classification of pupils, in instructional procedures involved in planning both group and individualized programs, in diagnosis of pupil disabilities, and in the discovery of scholastic aptitude and special talents. Any application of the criteria and principles of pupil classifications that are discussed in Chap. V would necessarily be based upon the use of appropriate standardized tests.

Scholastic aptitude may be measured with either standard intelligence or standard achievement tests. In measuring scholastic aptitude with intelligence tests, the assumption is that the intelligence-test scores or the derived quotients are proportionate to the true ability or aptitude of pupils. In measuring scholastic aptitude with achievement tests, the assumption is that the present learning

accomplishment is indicative of future learning ability. Probably the most satisfactory procedure is to combine the results of both mental and achievement tests. In order that teachers may plan instructional programs in accordance with the aptitudes of pupils, it is desirable that the results of several mental and achievement tests be made available in the cumulative-record folder for each pupil. For the majority of pupils, standard group tests that are administered annually will provide sufficiently reliable data for this purpose. Individual or specialized tests are desirable for exceptional children. Special abilities in musical, artistic, and mechanical fields and social relationships are related only slightly to general scholastic aptitude and to achievement as measured by standard achievement tests, but a knowledge of special talents in these areas may be discovered by means of special aptitude tests. The results of such tests contribute valuable information to teachers and assist them in planning special educational opportunities and in modifying group activities to meet individual needs.

Failure to achieve in academic subjects in proportion to one's general ability to achieve may be caused by a special disability, the nature of which can be discovered most effectively by means of appropriate diagnostic tests. Remedial procedures directed at such specific weaknesses often result in the early correction of the disability and in a more satisfactory adjustment and placement of the individual pupil.

In the selection and use of standard tests, it should be borne in mind that each test has been constructed for a specific purpose and is most useful for a specific group or developmental level. The success of any testing program will therefore depend in large measure upon the appropriateness with which tests are selected and with the reasonableness with which test results are applied to local classroom problems. A valid and reliable standardized test that is suitable for one eighth grade class in English, for example, may be quite unsuitable for another eighth-grade English class, even in the same school, because the educational needs of the pupils and the instructional purposes of the teacher may have been unrelated to the purposes for which the test was constructed.

Rating Scales—In addition to the data supplied by more formalized types of standard test, such as the achievement-test batteries, mental tests, and special-aptitude tests supplementary information is needed to gain a more comprehensive knowledge of pupils. Numerous devices have been invented and used with

varying degrees of success in securing such supplementary data. One of the most successful of these is the rating scale.

The rating scale is a standardized technique of recording subjective estimates or judgments of the amount of a trait or quality of behavior. Usually several traits or qualities of behavior are described and so spaced on a page that judges may record varying degrees of the trait possessed by pupils. The most effective form of the rating scale provides also for the citation of objective evidence to support the judgment of the rater. An example of a satisfactory rating scale in use today is the *Personality Report* developed by the American Council on Education. This scale contains the following questions:

- 1 How are you and others affected by his appearance and manner?
- 2 Does he need constant prodding or does he go ahead with his work without being told?
- 3 Does he get others to do what he wishes?
- 4 How does he control his emotions?
- 5 Has he a program with definite purposes in terms of which he distributes his time and energy?

The rating scale is widely used to sample interest and attitudes either by self ratings or by others.

Anecdotal Records and Interviews—Teachers, counselors, and administrators who anticipate using rating scales that provide for the citation of objective evidence to support their judgments should follow a systematic technique of recording and filing behavior incidents and accomplishments of pupils. Such a technique is called the "anecdotal" method of recording qualitative data. Every day contacts with pupils provide teachers with many opportunities to observe behavior and attitudes of a most intimate nature. Teachers who are alert to their guidance responsibilities develop the habit of jotting down such instances as they occur and of filing them in cumulative-record folders that are kept on each pupil. During the course of a semester it is possible to assemble an interesting and significant series of anecdotes that in many instances reveal significant trends of pupil development. Such an accumulation of data may reveal unusual strengths or weaknesses of character or personality. In either case these data are suggestive of developmental needs and hence are useful in guidance procedures.

The informal personal interview has always provided one of the most direct and satisfactory means of probing into pupil problems and understandings. Even after all available formal data have been assembled and studied, teachers and counselors find it possible to obtain a more complete understanding of specific behavior acts and of personal attitudes by means of the interview. More formalized interviews may be conducted by means of modified rating scales, questionnaires, or inventories. Through this means, counselors are able to record systematically the reactions and attitudes of pupils toward a variety of problems and relationships.

Questionnaires—The simplest and sometimes the only satisfactory approach to the study of pupil problems is that of asking direct questions that may be answered by pupils. Instruments used for this purpose are called "questionnaires." Interest questionnaires or interest inventories, for example, provide standard check lists of activities by means of which systematic expressions of pupil interests may be secured. The personality schedule is another type of questionnaire or inventory. These schedules are related to personal and social adjustment problems and reveal insights into the more intimate personal relationships of individual pupils.

The interpretation of the results of questionnaires should be made in the light of certain weaknesses that are inherent in the questionnaire technique. Pupils may not be able to interpret properly the questions asked, they may give answers that they think teachers prefer, or they may be unable to interpret their own attitudes or reactions toward the questions asked. These factors, together with the difficulty of interpreting total scores earned on a questionnaire, place this instrument among the less objective supplementary measuring devices. Although the questionnaire method has some faults, it is being used with some degree of success in classifying pupils, in organizing extraclass activity programs, in guidance, and in schedule making. By means of the questionnaire, it is frequently possible to gain insight into pupil problems and maladjustments that might not be discovered in any other way.

Newer Appraisal Instruments—Few standardized subject tests measure the ability to think, yet this ability is an important objective in junior high-school education. Recent efforts to measure the ability to think and reason in subject areas have been made by the Progressive Education Association. Recently made available are evaluation instruments to measure pupil ability involved in such

operations as interpretation of data, application of principles, ability to generalize, and logical and critical thinking. These appraisal devices are related to subject fields and measure specific pupil abilities in the physical, biological, and social sciences. By means of such tests, pupil progress toward the newer objectives may be measured and individual programs may be modified so as to secure optimal pupil development.

The evaluation of other aspects of pupil progress is being attempted with newer evaluation instruments in the measurement of study skills and work habits, social adjustments, creativeness, social sensitivity, and attitudes and appreciations. Various bulletins of the Progressive Education Association describe these devices. Interpretative presentations also have been made by Wrightstone¹ and Odell.²

Appraisal, evaluation, and measurement are ways of knowing and understanding pupils. Every test and every device that is used should be chosen because it is the best available means of securing needed information about pupils. Under no circumstances should the results of measurements and appraisals be considered ends in themselves. Even elaborate evaluation programs are futile unless the entire instructional staff of the junior high school, in cooperation with the administration, utilize data thus assembled to improve the instructional program.

The dependence of the program of studies upon its measured outcomes is emphasized by Odell in five steps that he considers requisite for the operation of a successful evaluation program.

1 There must be agreement reached as to the desired outcomes of the program under consideration, whether this be individual school subject, single subject field, entire school unit, or whole educational program.

2 There must be agreement as to how all of these outcomes might reasonably manifest themselves, whether this be in newly acquired knowledge and skills, or in modified attitudes and appreciations, or in new types of overt behavior not measurable by ordinary type tests.

3 There must be found or developed ways of measuring either objectively or subjectively as many as possible of these manifestations of the agreed upon outcomes.

¹ WRIGHTSTONE, J. WAYNE, "Evaluation of Newer Instructional Practices," *Newer Instructional Practices of Promise* Twelfth Yearbook Department of Supervisors and Directors of Instruction, National Education Association, Washington D. C., 1940.

² ODELL, W. R., "Evaluation Principles and Procedures" *Bulletin* mimeographed, Public Schools, Oakland, Calif., 1939.

4 These measurements must be applied to as many as possible of the students involved in the educational program under scrutiny

5 The results of the measurements must be made the subject of study by the group concerned with the evaluation of the educational program so that a consensus can be reached as to its efficacy¹

INFORMAL TEACHER-MADE EXAMINATIONS

Advances that have been made in the testing movement during the last two decades, and particularly the contributions of the Progressive Education Association, with their newer evaluation instruments, have led many teachers to believe that teacher-made tests may now be replaced with seemingly appropriate standardized tests. The construction of really good teacher made examinations is an exceedingly meticulous and laborious procedure, and if the construction of tests could be delegated to experts, much of the time and energy of overworked teachers might be directed into other instructional activities. Unfortunately this is a hope that has little basis in reality, for no standardized test, and no series of standardized tests may satisfactorily replace teacher made examinations. This is true for the reasons that the objectives for a class should be determined by the abilities and needs of the group, that the specific instructional materials and emphases are determined by objectives, and that the experiences of pupils in classrooms are always strongly influenced by the group and by current local conditions of which standard test makers are unaware.

Pupil progress resulting from individualized instruction and from socialized activity programs thus may be measured only in part by standardized instruments. At best these may provide supplementary data that, although highly essential in the total appraisal program, may not replace teacher made examinations.

Furthermore, in modern junior high schools, the appraisal of pupil progress may not be restricted to progress in formal academic subjects. Pupil progress toward the broader objectives of junior-high-school education must also be measured insofar as this is possible. Satisfactory formal instruments are not available to evaluate pupil progress toward many of the newer educational objectives. As a consequence, a considerable amount of the appraisal of pupils must be done by teacher made tests.

Teacher made tests are constructed for specific purposes, just as are the formal, standardized tests. Informal teacher made tests

¹ *Ibid*, p. 4.

should yield interpretable data indicative of pupil progress toward stated objectives. Variations in the organization of the mental abilities of pupils result in a superior facility on the part of some pupils in handling one or another form of an examination. Some pupils who excel when tested with essay examinations may appear at a disadvantage in the same field when confronted with true-false or multiple-choice items. Other pupils excel on objective items and do poorly on essay questions. To equalize such differences among pupils and to provide a suitable medium with which to test various objectives, a good teacher made examination should be balanced with a judicious use of varied examination forms.

Essay Examinations—Among the advantages claimed for the essay examinations are (1) that it measures the amount of usable knowledge that pupils possess, (2) that it measures the ability to organize the factual knowledge around some major problem, (3) that it measures the ability of pupils to apply knowledge in the solution of new problems, and (4) that it reveals the extent to which meaningful and logical relationships have been established by pupils in specific areas of experience.

The validity and the reliability of the essay form of examination may be questioned in relation to the advantages that it is presumed to possess. Average junior high-school pupils possess extremely limited ability to express themselves in written language even under the most favorable conditions. Ordinarily, the conditions under which examinations are given create a greater or lesser degree of emotional tension, which inhibits effective written expression. Under these restrictive conditions the validity of the essay examination will necessarily vary with the objective being measured, with the ability of pupils to express themselves in writing, and with the influence of emotional tensions upon the recall and organization of knowledge in essay form.

The validity of the essay examination may likewise be questioned with respect to the measurement of attitudes and appreciations on the grounds that essay paragraphs are merely verbal expressions of pupils and that they may or may not indicate the true attitudes and appreciations held by pupils. It is likely that methods can be found that are superior to the essay examination for the development and organization of knowledge and the development of writing ability.

The reliability of the essay examination is inevitably affected by its limited sampling of an experience area and by the subjectivity of scoring or evaluating the total essay in relation to the objectives.

measured. In spite of its weaknesses and limitations, the essay examination continues to be popular, but as it is ordinarily used at the junior high-school level, it is definitely inferior to more objective examination forms. However, the reliability of the essay examination may be increased by adopting certain improved scoring procedures. These techniques include (1) preparing key answers for each question, which state explicitly all the facts and ideas for which credit is to be allowed, (2) scoring each essay item upon a predetermined point scale with weighted credit points for each idea included in the key answer, (3) scoring all papers without reference to the names of pupils, and (4) scoring all the answers to a single question before going on to other questions. The accumulation of point scores for the entire essay examination may be used as a total point score for each pupil. Total scores thus obtained may be ranked or cast into frequency distributions and treated as any statistical series.

True-False Examinations.—The true-false test is composed of a series of true and false statements that are to be marked with an appropriate symbol. The advantages claimed for this type of examination are (1) that it offers an opportunity for the widest possible sampling of a subject field, (2) that its scoring is entirely objective, (3) that it lends itself admirably to thought questions, and (4) that it stimulates critical thinking. When skillfully constructed the true-false examination possesses many of the advantages claimed for it. However, there are certain weaknesses that are common to the true-false examination as it is ordinarily used. Among these should be noted the prevalence of ambiguous statements, including those having two ideas, one of which is true and the other false, and the tendency to restrict items to mere factual information. Critics of the true-false examination emphasize the difficulty of testing meaningful relationships among factual data through this medium and have pointed out the frequency with which statements are only relatively true or relatively false. Nevertheless, the true-false examination is readily adaptable to the junior high-school level, the fairness involved in its objective scoring is quickly appreciated by pupils, and, on the whole, it is probably the best liked form of examination that can be used. The true-false test possesses a distinct advantage over other forms of objective examinations when a wide sample of the knowledge of a subject field is desired under limited time conditions, when a test of the accuracy of generalizations held by pupils after controlled experi-

ences in subject fields is desired, and when a short check quiz is needed for daily classroom work

Multiple-choice Items—The multiple-choice item consists of a partial statement, followed by several plausible phrases needed to complete the answer, only one of which is correct. Each of the alternative responses is given a number that may be written in the margin opposite the number of the item.

The advantages claimed for the multiple-choice examination form are (1) that it provides one of the best forms for testing reasoning ability, (2) that writing by pupils is reduced to a minimum, and (3) that the scoring is thoroughly objective. The weaknesses of multiple-choice examinations are (1) that it is difficult to construct four or five plausible alternative responses, (2) that only a limited number of items can be placed upon a single page, (3) that statements are subject to ambiguities, (4) that the correct response may be self-evident or that one or more of the incorrect responses may reasonably be selected as the correct one, and (5) that the reading involved often is excessive and time-consuming.

The greatest contribution of the multiple choice examination is in its measuring of the ability to select the most appropriate of alternative responses under controlled conditions. The reasoning and judgment involved in such a selection are important aspects of mental development and hence, in spite of its weaknesses, the multiple-choice examination should occupy an important place in measuring the intellectual and educational growth of junior-high-school pupils. Both the true-false and the multiple-choice examination test the ability to recognize true statements when these are presented.

Completion Items—The completion test consists of a series of true statements from which key words or phrases have been omitted. The missing words must be written on a blank provided in the test preferably in the margin. The completion test is one of the oldest forms of objective examinations. When the purpose of the test is to measure the ability to recall facts or knowledge, the completion item is superior to many other objective test forms. The weaknesses of the completion test are (1) that the scoring is only partially objective, (2) that the evaluation of variable pupil responses may be time consuming, (3) that statements often fail to suggest the type of response desired, (4) that statements themselves often make answers evident, and (5) that sometimes so much of a statement is omitted that it becomes meaningless.

Less commonly used objective-test forms include the matching exercise, the rearrangement test, and various combinations of the more basic types. There is only limited experimental evidence on the specific value of different types of objective-test forms, therefore teachers are forced to depend largely upon their own experience in choosing the particular form or combination of forms to measure accomplishments under consideration.

SCORING INFORMAL EXAMINATIONS

Each informal examination should be given for a specific purpose. The results of the examinations should yield intelligible answers to three questions: (1) How much absolute progress has each pupil made toward the objectives being measured? (2) How much progress has each pupil made in relation to the group with whom he is working? (3) How much progress has been made by the group? The methods used in scoring examinations have much to do with the usefulness of the results. The three questions that need to be answered imply a need for quantification of test results.

The practice of assigning quantitative value to test items and to total examinations has created an important distinction between test scores and school marks. The traditional practice of assigning letter marks to essay examinations makes no such distinction. Test scores should be interpreted as relatively arbitrary numerical values assigned to pupil performances in accordance with the best judgment of the teacher. School marks should represent a direct interpretative appraisal of the merits of test scores or of pupil performances. From test to test there may be little correspondence between the merits of a test performance and the numerical values assigned. It is important, therefore, that the two processes of scoring and evaluating test results be kept separate.

Point Scores —Probably the most satisfactory scoring technique for all forms of teacher-made examinations is to be found in the use of the numerical point score. In this procedure numerical values are assigned to each test item in accordance with teacher judgments of its weight with respect to the objective under consideration. Obviously, some behavior patterns and some knowledges, skills, and habits will represent greater progress toward desired objectives than will some others. By carefully analyzing objectives into immediate and intermediate stages in terms of class activities and by assigning appropriate weight to the more important aspects of development, teachers may prepare tests that reveal more exactly

the present status of pupils with reference to the goals toward which they are working. The summation of the points credited to each of the several items in an examination provides a numerical score for each pupil for the total examination.

The use of a system of point scores in the appraisal of pupil progress has the following specific advantages over other scoring techniques: (1) point scores are quantitative, (2) point scores are applicable to all types of examinations, whether standardized, essay, or teacher-made objective tests, (3) being quantitative, point scores earned on various tests may be readily combined into a single score, (4) point scores are subject to statistical analysis and treatment; (5) point scores are readily convertible into various graphic representations of individual and group progress, (6) point scores are easily understood by pupils, (7) point scores may be readily transmuted into school marks, and (8) the point-score system makes no assumption of appraisal value but is merely a quantitative expression of amount.

Percentage Scores—Although total point scores may be converted into percentage scores under the assumption that the total possible points that may be earned on an examination represents 100 per cent of the test, this usage should not be confused with the widely used percentage-scoring and marking system. The traditional percentage-scoring system is based upon the assumption that the items included within a single examination represent 100 per cent knowledge or performance. In accordance with this assumption, it is the common practice to assign pupils a score of 100 per cent when all questions are answered correctly, 80 per cent when 80 per cent of the questions are answered correctly, and corresponding percentage scores on down the scale until an unsatisfactory or failing level is reached. Most commonly the failing point is arbitrarily placed somewhere within the vicinity of the 70 or 75 per cent mark.

The use of the percentage system of scoring is based upon the further assumptions that all the items contained in a test are of equal difficulty, that it is possible to establish a zero point and a 100 per cent point of learning, that teachers are able to distinguish between 101 equal divisions of subject matter, that is between the established zero and the 100 per cent mark, and that the difference between the value of any two per cent marks is proportionate to their numerical difference, regardless of their positions in the scale. Thus the difference between 8 and 9 per cent is assumed to be equal to

the difference between 98 and 99 per cent. Obviously, these assumptions cannot be fulfilled under the practical conditions involved in teacher examinations, and hence the use of the percentage-scoring system becomes an indefensible misapplication of the concept of percentages.

When an arbitrary failing point is set on the percentage scale, the use of the percentage system of scoring becomes even less defensible, since there must be either a violation of the first principle of individual differences, that of the normal distribution of talents and abilities, or a restriction of the percentage scale to a range between 100 per cent and some point only slightly below the arbitrary failing point.

When the point-scoring system is used for examinations, there is one defensible use of percentages in connection with the interpretation of an individual's progress in a specific area of experience. The absolute progress of a pupil may be represented quantitatively by the difference between his numerical score on an initial test and his cumulative score at midsemester. Thus, for example, if, at the beginning of the semester, a pupil's point score on a test measuring ability to think was 50 out of a possible 300 points and his cumulative score at midsemester was 150 out of a possible 300, his absolute progress in ability to think would be 100 points. This might be expressed as 33 per cent improvement over his initial performance. So long as it is recognized that there is no assumption of an absolute zero and a perfection point and that the specific use of percentage is applied to a given test situation only, no violent interpretative errors are likely to disturb the examination results.

Comparisons between a pupil's initial and final scores on examinations should provide a partial answer to the first question for which examinations are given, namely, how much progress each pupil has made toward the objective being tested. The interpretation of test results so as to yield answers to the questions how much progress the group has made and how much relative progress each pupil has made in relation to the group may be answered only through a statistical treatment of the test results. Needed for this purpose are the commonly used measures of central tendency and variability, the mean and standard deviation, or the median and the quartile deviation.¹

¹ GARRETT H. E. *Statistics in Psychology and Education*, Chaps. II, III, and VII. Longmans Green and Company, New York, 1937.

REPORTING PUPIL PROGRESS

One of the important reasons for measuring the growth and achievement of pupils is to enable teachers to plan and direct pupil progress toward the goals of education. Another important reason is to provide a permanent record of achievements, both for school purposes and as a means for reporting the progress of pupils to parents. It has long been the practice in American education to report the accomplishments of pupils in terms of school marks based upon the results of teacher made examinations. So long as educational objectives were restricted to subject achievement, it was relatively simple to measure and report achievement in terms of percentages or letter marks. With the changing concept of the function of education to include broader aspects of personality development and human relationships as necessary outcomes of schoolwork, pupil progress should no longer be reported exclusively in terms of subject achievement.

School marks should symbolize the results of teacher and school appraisals of the present status and progress of pupils in all important areas of development. They should indicate, further, an interpretable picture of the relative standing of pupils, the amount of improvement between reports, the areas of greatest development and the areas in which greater emphasis for future improvement should be placed. Furthermore, school marks should interpret to pupils and parents educational objectives as well as the progress of pupils toward those objectives.

Marking Systems—A wide variety of marking systems is in use in public schools today, and there is no theoretical agreement as to which plan is the most adequate. One system of marking the percentage plan, has already been discussed. Percentage scores are sometimes converted into letter marks, most commonly into five groups, represented by the letters A, B, C, D, and E or F. The standards of local schools determine in large measure the range of the percentages grouped together under each letter mark.

Frequency Distributions—A widely used plan of assigning marks is that of converting point scores into frequency distributions and assigning letter marks systematically to scores occurring in various ranges of the distribution. Thus the top 5 or 7 per cent of scores are marked A, the next 20 or 25 per cent, B, the middle 40 to 45 per cent, C, the next 20 or 25 per cent, D, and the lowest 5 or 7 per cent, F.

The advantages claimed for the frequency-distribution plan are that marks are assigned objectively on the basis of point scores earned in various teacher made examinations, that pupils are able to interpret their relative position in the group, that the plan is based upon the concept of a normal distribution, that the assignment of letter marks does not destroy the record of point scores that may subsequently be added to scores earned on other tests without the penalty of gross grouping errors.

Two assumptions, however, underlie the use of this plan. The first is that the ability of the class is distributed according to the normal curve, a condition that may be approximated only with very large classes, those ranging above 150 or 200 pupils. Seldom are such classes found in public schools. The second assumption is that all classes are of equal ability. This assumption is violated more commonly than it is met. Seldom is it possible to establish standards of accomplishment that are rigorously comparable from class to class and from semester to semester, even when the abilities of pupils in different classes are the same, because there are inevitable changes in the objectives, subject materials, and procedures of class sections, even in the same grade and subject. Another reason for the lack of comparability between classes is to be found in the variability of teachers through such factors as standards of excellence, professional growth, health, and emotional stability. When the frequency-distribution plan is modified subjectively by means of teacher judgment so as to allow for deviations from the normal distribution of talents and so as to adjudicate differences between classes in accordance with the quality of the performances, the plan may be used with some success.

Modified Letter Plans—Both the percentage and the frequency-distribution plans more properly may be interpreted as means of scoring or treating scores so that the traditional A, B, C, D, E, F letter marks may be administered. Widespread recognition of the basic weakness of marking systems may be seen in the relatively recent plans that substitute three categories of marks for the traditional five-point letter marks. In this newer plan, the marks given are outstanding, satisfactory, and unsatisfactory, symbolized by the letters O, S, U. In some cases marks have been further reduced to the two categories of pass and fail. Advocates of this simplified plan of marking contend that the unfairness and invalidity of the more rigorous five-point scale justifies the substitution of a simpler plan.

The elimination of two or three divisions of the traditional system of marks in no way removes the basic inadequacies of the older plan, and in a majority of cases where such modifications have been introduced, additional weaknesses and inadequacies have developed. To be forced to resort to the three-letter plan, for example, is to admit an inability to differentiate the achievement and progress of pupils with a finer degree of exactness than that indicated by the marking plan. Even so, however, teachers are faced with the necessity of defining the meaning of outstanding, satisfactory, and unsatisfactory in terms of behavior and accomplishment, related to the various objectives held by the school. It is in defining these terms and in distinguishing between them that this newer plan most commonly breaks down. The plan itself suggests no criteria by means of which teachers may distinguish between pupils who have done outstanding work and those who have done satisfactory work. When adequate measurements are made of pupil progress toward school objectives, there is thus provided the basis for making refined differentiations between pupils that may be reported in as many categories as are consistent with the data themselves. On the other hand, if only subjective estimates of progress are made by teachers, then it is questionable whether even three classifications of pupil progress may be made with validity.

As a further complication of this supposedly simple system of marking, there have been introduced the qualifying phrases "outstanding progress for one of his or her ability," "satisfactory progress for one of his or her ability," and "unsatisfactory progress for one of his or her ability." The adoption of such qualifying phrases implies (1) that pupils have been placed in homogeneous mental-ability groups and (2) that instruction has been differentiated in accordance with the mental abilities of pupils. The use of school marks that have been modified in accordance with this procedure is currently heralded not only as a distinct departure but as a decided improvement upon traditional marking procedures. If it were possible to know the intellectual ability of a pupil with a high degree of certainty and if it were possible to predict future mental ability with exactness, the use of such a phrase as "for one of his or her ability" might be made with some degree of interpretive validity. In Chap. III, however, it is indicated that, although the intelligence quotient remains relatively constant, marked individual fluctuations are to be expected and that many factors influence mental measurements and mental growth. It is further

indicated that there are relatively few experimental data indicating the performances that may be expected of pupils in various intellectual levels with reference to any field of learning. Thus, at present, no one is able to say with exactness what achievement or progress may reasonably be expected from a pupil whose I Q is, for example, 87. It would therefore appear that, laudable as the three-letter plan appears on the surface, it is more than likely to result in gross injustices to pupils and in the thwarting of potentialities that, under more favorable conditions, might be brought to fruition.

Furthermore, school marks should be readily understood by parents. The phrase "for one of his or her ability," if understood by parents in the same light as it is used by teachers, would require the release of all the confidential data that have been assembled by the school on each pupil. A knowledge of the intellectual abilities of pupils is a professional secret that should be divulged to parents only under unusual and particular situations but never as a routine procedure. As a consequence, when parents are unaware of the mental abilities of their children, the interpretive phrase "for one of his or her ability," becomes relatively meaningless. This type of school mark is inadequate, because it is not a concise, intelligible report from the point of view of the parent, it is based upon an assumption of a knowledge of pupils that cannot be met in practice, and it is fraught with dangerous possibilities of injury to individual pupils.

Grade-score Marking System—In an effort to overcome faults of marking systems, McCall has invented an ingenious plan of converting all measurements of pupil progress into grade or age scores in relation to the mental ability of pupils projected to the time when grades are administered. This plan may be adapted equally well to all subjects and to all areas of development after these have been measured and scored by whatever means teachers prefer. There are only four simple steps in the plan. In McCall's words, these steps are as follows:

1. Early in the term apply an intelligence test to secure for each student in the class a grade score in intelligence (G_i).
2. Arrange these G_i 's in order of size, the highest at the top and project them by increasing each by 0.1 for each month until the next promotion date.
3. Apply any teacher-made test or standard test in any subject, score it in any way and arrange the papers in order of merit, the best at the top.

4 Assign the highest test paper the highest projected G₁. Assign the second highest paper the second highest projected G₁, and so on. Record these grade scores in the Teachers' Record Book under the subject covered by the test.²

The grade-score system is recommended as the most suitable marking plan for the junior high school. The full description of the plan should be studied as it is presented by McCall.³

The relative merits of three marking systems, the grade score, the percentage, and the frequency distribution, as judged by graduate students of education at Columbia University according to 33 criteria that are generally accepted as characteristic of a good marking system, are presented in Table XXIII.

The Importance of School Marks—The psychology of learning indicates clearly the importance of a knowledge of progress in learning situations. Thorndike's law of effect centers the motivating force in various rewards, satisfactions, annoyances, and punishments. When school marks are valid indications of individual pupil progress toward worthwhile educational objectives, they possess distinctive value as a means of furthering pupil development. Pupils are willing to work for marks rather than directly for understanding or for the acquisition of knowledges and skills or for the development of attitudes and appreciations, because marks have come to be symbols of school rewards and of academic and social approval.

Because of the growing recognition of the weaknesses of marking systems, some educators are suggesting the elimination of marks altogether, others are substituting descriptive reports that involve excessive labor and highly fallible teacher judgments. All too commonly, school marks are regarded as necessary evils by both teachers and pupils, whereas they should be considered as evidence of approval and distinction for worthy accomplishments. The solution of this problem lies not in eliminating school marks but in improving them and in offering appropriate marks for broader aspects of pupil development. Since character development and personality development are included among the objectives of junior-high-school education, development in these areas should be given generous social approval through school marks in a man-

¹ McCall, William A., *Measurement* pp 421-422, The Macmillan Company, New York 1939

² *Ibid.*, pp 419-469

TABLE XXIII—RELATIVE MERITS OF THREE MARKING SYSTEMS*

Key to Ratings

2 = reasonably satisfactory

1 = partially satisfactory

0 = unsatisfactory

Criteria	Ratings		
	Grade score	Percentage	Distribution
1 Enable pupil to compare his achievement with the average for all pupils in his grade and school	2	2	2
2 Enable pupil to see the amount of his growth in every subject from year to year	2	0	0
3 Enable pupil to compare his present achievement with his own past record for the year	2	1	2
4 Enable pupil to compare his achievement in different subjects and determine which need emphasis	2	1	2
5 Enable the teacher to compare the achievement of different pupils	2	2	2
6 Enable the teacher to see the amount of growth any pupil has made from year to year	2	0	0
7 Enable the teacher to compare the achievement of a pupil in different subjects	2	1	2
8 Enable the teacher or supervisory officer to compare the achievement of a pupil or class with the achievement of pupils or classes in the same grade in other schools or school systems	1	0	0
9 Enable the teacher to compare a pupil's record in one grade with his record in any other grade	2	1	1
10 Enable the teacher to section pupils within a class or grade	2	2	2
11 Enable the teacher to determine whether a pupil is achieving as much as you would expect, in view of his intelligence	2	1	1
12 Enable the teacher to determine whether a pupil is achieving as much as you would expect in view of his chronological age	2	0	0
13 Enable the teacher to give a meaningful report to parents so that teacher and parents may discuss intelligently the educational problems of the student	2	1	1
14 Enable the teacher to see how inaccurate her examinations are	2	1	2

* McCall, William A., *Measurement* pp 47-477 The Macmillan Company New York, 1922.

TABLE XXIII—RELATIVE MERITS OF THREE MARKING SYSTEMS—
(Continued)

Criteria	Ratings		
	Grade score	Percentage	Distribution
15 Enable the teacher or supervisory officer to compare a pupil's scores on informal examinations with his scores on a standard test	2	0	0
16 Enable the teacher or supervisory officer to combine scores on informal and standard tests	2	0	0
17 Enable the teacher or supervisory officer to regulate the emphasis on different subjects	1	0	1
18 Enable the administrator to standardize the classification system throughout a community, county, state, or various colleges	2	0	0
19 Enable the administrator to transfer and accurately classify pupils from another school or school system	2	0	0
20 Enable the administrator to make such a classification of pupils as will secure and maintain equal intervals of achievement between grades	2	0	0
21 Enable the administrator to adjust the classification system to the intelligence of pupils in his school	2	0	0
22 Enable the administrator to section pupils into classes within a grade or within a subject	2	0	0
23 Enable the administrator to largely eliminate differences in standards of teachers, thus avoiding the injustice of too severe or too lenient marks	2	0	1
24 Provide the school with a just and impersonal system, thus largely freeing the teachers from the strain of deciding upon marks and from the pressure of parents	2	0	1
25 Focus the attention of parents upon the growth of the pupil instead of upon a particular grade classification, thus enabling the school to classify pupil where growth in G score will be greatest	2	0	0
26 Permit school to base graduation upon growth attained instead of particular grade status, thus still further freeing the teachers from parental pressure	2	0	0

TABLE XXIII—RELATIVE MERITS OF THREE MARKING SYSTEMS—
(Continued)

Criteria	Ratings		
	Grade score	Percentage	Distribution
27 Protect pupils from unfair pressure from home or school	2	0	0
28 Marks are always in numerical form thus facilitating calculation	2	1	1
29 Enable the teacher or research worker to study scientifically many educational questions	2	0	1
30 Permit college and high schools to select pupils without entrance or Regents examinations thus materially freeing lower schools from the domination of upper schools	2	0	0
31 Permit schools consciously to set and intelligently administer minimum graduation and admission requirements	2	1	1
32 Permit high schools and colleges to set admissions on requirements in terms of both achievement and brightness	2	0	0
33 Permit exact and national certification of graduates in terms of achievement	2	0	0
Total	64	15	23

ner comparable to that which is used for commendable subject achievement

Much of the confusion in modern education results from attempts to continue traditional marking plans for instructional procedures directed toward the realization of broader objectives and toward the total development of the pupil. Under these conditions, junior high-school pupils are quick to appreciate the fact that few rewards are forthcoming for character and personality development, and hence procedures and activities directed toward these ends become less effective.

Importance to Teachers—Appropriate school marks are symbols representing mature teacher judgments and appraisals of the development of pupil personalities in various educational social situations. They are an important basis for the planning and the modification of instructional programs for individual pupils, for all their regular class activities and their extraclass activities. They provide an invaluable source of evidence for counseling and guidance.

Managers of business and industrial organizations are expected to make annual or semiannual reports to boards of directors on the status of the business. Such reports include inventories, statements of profit and loss, and other details revealing the progress of the enterprise during the year. In a somewhat comparable manner, school administrators are expected to report to the board of education and to the general public on the present status of the public schools, on factors other than a formal accounting of the expenditures of public money. The profit of an educational system is to be found in the development of pupils. An interpretative evaluation of the progress of all pupils might well become a part of the annual report of school administrators.

Importance to Parents—One of the most effective ways of acquainting parents with the objectives of the school is by means of school marks and report cards, which interpret the progress children are making in their school activities. When teachers and parents understand and agree upon the objectives toward which pupils are working, and particularly when evidences of pupil progress are pointed out through appropriate report forms, there is little room for misunderstandings about instructional materials and procedures.

Under the pressure of modern education, junior high-school teachers may have from 150 to 200 different pupils in their classes. Sometimes teachers minimize the interest that 300 or 400 parents have in those same children. Frequently the only official knowledge that parents receive relative to the behavior and growth of their children during the time they are in school is found summarized in the meager reports that are periodically sent to the home. These reports are of great importance. When teachers are held in high esteem and are regarded as highly qualified professional persons, school reports often outweigh even parental judgments of their own children. Untactful, unjustifiable, or erroneous school reports violate the common sense and experience of parents, arouse antagonism, and prevent close cooperation between the home and the school. Fair and adequate marks that may be interpreted by pupils and by parents provide an effective means of securing intelligent cooperation between the school and the home and of helping parents to understand their own children better.

SUMMARY

Measurements and appraisals should be directed toward the discovery of pupil accomplishments, abilities, interests, and needs.

in order that the formulation of objectives, the selection of instructional materials and procedures, the organization of extraclass activities, and, in fact, the administration of the total program may be directed toward the optimal development of each pupil.

The means of appraisal should include the appropriate use and interpretation of the most effective and scientific standard measuring instruments and appraisal devices as well as the use of increasingly effective teacher-made examinations. The scope of the appraisal program should include measurements of pupil progress toward all the educational objectives held by the school.

An adequate, valid system of marking and reporting pupil progress is essential in modern junior-high-school education. School marks should symbolize the results of evaluations of pupil progress in all important areas of development. School marks may be of educational significance (1) to pupils by acquainting them with the objectives of the school, by revealing the knowledge of progress toward school objectives, and by serving as incentives to further accomplishments; (2) to teachers by serving as a means of self-appraisal, by providing an articulate basis for individualized pupil and group-instructional planning, as well as for other forms of guidance and counseling, and by promoting the development of a critical self-appraisal by pupils; (3) to administrators by providing a basis for the classification, promotion, and guidance of pupils, by providing a means of evaluating teacher efficiency, and by interpreting the schools to the public; and (4) to parents by acquainting them with the objectives of the school, by helping them understand their own children better, and by aiding in the development of an intelligent cooperation between the home and the school.

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PART IV

*The Administration of Junior-high-school
Education*

CHAPTER XIII

THE PRINCIPAL AND HIS STAFF

The instructional program of the junior high school provides the material means for developing pupils in relation to their personal characteristics and their educational needs, but the principal and his staff provide the personal means for implementing this program. So great are the complexities of society and so varied are the developmental and socializing experiences needed by pupils that the coordinated efforts of many persons are required to direct pupils toward the desired goals of the junior high school. Even though teachers understand their pupils and even though there may be an adequately planned instructional program, the coordinated efforts of properly qualified administrators, teachers, attendance officer, counselors, nurse, coordinator of extraclass activities, librarian, secretarial staff, cafeteria manager, and custodians are needed.

The present chapter is concerned with the professional qualifications, duties, and relationships of the various persons who are needed in the operation of the modern junior high school. Every junior high school has a principal and a quota of teachers, but there is considerable variation in the titles given to persons holding subordinate administrative positions and to those performing the newer service functions of the school. In certain large junior high schools, it is found desirable to have a full time vice-principal who assists the principal with many details of administration and who may be responsible for the supervision of attendance, of instruction, of guidance, or of other school functions. Similarly, some schools have a dean of boys and a dean of girls in addition to counselors and other administrative officers. The titles for officers depend largely upon the policy of the school system. The titles used here are fairly descriptive of the functions to be performed, but it should be remembered that the duties described often are assigned to officers with other titles.

THE PRINCIPAL

The junior high school principal is the chief administrative officer of the school and, as such, is legally responsible to the

superintendent, the board of education, and to the state for the prudential administration of the school and for the safety and welfare of the pupils. Professionally, he is responsible for many services, both in the school and in the community.

Duties and Responsibilities.—The complexity of the duties and responsibilities of the principal and the interrelationships that these have with other school personnel make any classification of his functions quite arbitrary. Nevertheless, four broad aspects of the responsibilities of the principal include selecting personnel, assigning responsibilities, building solidarity and morale, and meeting professional and community responsibilities outside the school.

Selecting Personnel—Teachers and other school personnel may be selected by the principal, by the superintendent, or by both in cooperation with other administrative officers who may be concerned with teacher selection. The latter method of selection is widely followed and is generally considered the more effective both for selecting superior teachers and for establishing closer professional relationships within the school system.

In the selection of teachers, the first responsibility of the principal is to the pupils under his care. This means that his professional obligations outweigh all personal considerations for the welfare of prospective teachers. Principals should select or recommend for selection only those teachers who are best qualified personally and professionally for specific positions, keeping in mind the relation of such positions to all other personnel within the school. Only the principal who is familiar both with the requirements of each position and with the qualifications of his entire staff can determine the most suitable qualifications for personnel in his school. Thus it not infrequently happens that the usual academic requirements for a position become of less importance than certain personality qualities or leadership qualifications.

Since the principal is partly responsible for selecting his teaching staff, he must be constantly alert to discover capable and promising new personnel. Information about prospective teachers may come to the principal through letters of application, through teacher-placement bureaus, through visits to teacher-training schools, or through associations with his colleagues. Information about teachers that comes from nonprofessional sources should be largely discredited. Social or political pressure exerted on behalf of a prospective teacher, from whatever source, is unprofessional. Obviously,

the first set of data about a candidate which a principal is interested in reviewing is the complete record of college courses, teaching experience, and participation or leadership in community activities. These data are usually available from placement offices.

The appraisal and evaluation of candidates for teaching positions obviously must precede selection. Letters of recommendation from competent professional persons about prospective teachers often furnish valuable information that can be gained in no other way. Letters that are of most worth present a confidential all round picture of the candidate in an honest, straightforward manner in relation to the position involved.

Because not all letters are of equal value or comprehensiveness, it is frequently necessary for the principal to write directly to persons named in applications asking for specific information about the qualifications and experience of the candidate. In addition to letters of application and the confidential credential papers from placement bureaus and direct letters of recommendation, principals may request a personal interview with a candidate. In the personal interview, the discerning principal may acquire valuable information about the candidate's general bearing and appearance, his philosophy of education, and his breadth of interests. In addition to all these sources of information about candidates, some larger school systems require applicants to take a qualifying examination. Sometimes these examinations provide data that are not found among the candidate's credentials.

Sharing Responsibility —The principal is the chief administrator of the school. The position of the administrator implies a responsibility for delegating and assigning important duties to subordinate staff members and for exerting a high degree of professional leadership over the entire school. Building an efficient staff therefore becomes one of the first and most important duties of the principal. Various administrative assistants must be chosen for positions that they are capable of filling. Thus from personnel assigned to the school, the principal, in cooperation with the superintendent, may choose counselors, the coordinator of extraclass activities, the director of attendance, deans, and vice-principal, if such offices exist, and other administrative assistants as they may be needed. When the personnel of the school have been properly selected there will be available persons who are capable of directing and supervising all the special services of the school.

The success of the principal will depend in large measure upon his administrative ability in selecting his staff and in maintaining their loyal cooperation and support. It is of particular importance that the principal be thoroughly familiar with the talents, training, and interests of each member of his faculty and that he secure the active, enthusiastic participation of persons whom he selects for administrative work. After administrative personnel have been chosen, the principal must then define the duties and responsibilities of each person so that the entire staff will understand the scope and limitations of each assignment. The right to delegate important responsibilities to subordinate staff officers carries with it an obligation on the part of the principal to exert strong leadership and support of each assistant wherever and whenever needed for the welfare of the school. However, the supervision and leadership of the principal should not be so detailed or so dominating as to discourage the initiative and creative efforts of his assistants.

The selection of administrative assistants is only the first step in the assignment of duties. The more complete allocation of duties and assignments for all staff members throughout the total program of the school may be seen in the master schedule, which provides the time for the performance of special as well as of regular duties.

Probably the most important aspect of sharing responsibility within the school is the development of a sense of personal responsibility for the welfare of the entire school on the part of every member of the faculty. This means that every teacher shall be made to feel partly responsible for the success of the extraclass activities program, that each shall feel partly responsible for the success of the guidance program, and that each shall feel partly responsible for many other services and details essential in the operation of the school. After properly qualified administrative assistants have been selected and after an adequate master schedule has been established, the most effective way of developing the sense of shared responsibility among the entire faculty is through the operation of some plan whereby the school may be administered democratically. The plan for teacher participation in the administration of the school, which is proposed in the present volume, is presented in Chap. XIV. Such a plan provides the framework within which the principal may coordinate administrative procedures through his personal influence and professional leadership.

Building Solidarity and Morale—School spirit, school loyalty, and school morale exert powerful influences over pupils and over the

faculty In large measure the responsibility for building school morale and solidarity rests with the principal A principal who has wisely and thoughtfully selected his personnel and fairly and intelligently divided responsibilities among them will have taken two important steps toward this goal

Strong desirable personal qualities and characteristics of the principal greatly influence his relationships with the faculty and with pupils These qualities are those usually ascribed to leaders and include frankness, fairness, friendliness, and integrity, along with other desirable personality qualities Of particular importance, however, in developing solidarity and loyalty is a generous and judicious recognition of the worthy accomplishments of teachers and pupils Strong personal and school loyalty can be effectively established through the appropriate recognition of accomplishments and the praise of efforts

The consistency and dependability of the principal's administrative policies and personal relationships strongly influence *esprit de corps* Stable administrative policies build security and confidence among pupils and teachers in all their personal relationships and professional duties It is, of course, important for the principal to interpret his policies so that both pupils and teachers understand them thoroughly School policies that are democratically evolved in the administrative council are stable and are easily interpreted both to pupils and to teachers

Improving the School—Although all the duties of the principal are directly or indirectly concerned with improving the school, particular attention needs to be directed toward improving the personnel and the total instructional program Usually specific procedures of this nature are classed as the supervisory activities of the principal

Improving the personnel of the school involves (1) helping teachers to understand pupils in relation to educational objectives and to the instructional program, (2) stimulating teachers to enrich their cultural and social backgrounds, (3) promoting the interest of teachers in general professional affairs, and (4) encouraging all personnel to keep abreast of their respective fields

Supervising the instructional program for purposes of improvement implies familiarity with the objectives, materials, and procedures in every department of the school Although the principal may have the assistance of supervisory specialists, a large part of this responsibility may not be delegated The principal must view

all aspects of instruction as parts of a related total program so that a balanced and integrated instructional program may be achieved. He must likewise encourage the use of increasingly appropriate materials and procedures along the lines indicated in Chaps VII and VIII.

Closely related to the improvement of personnel and of the instructional program are the principal's supervisory duties with regard to the school plant, including special services and all equipment and material resources of the school.

Meeting Responsibilities Out of School—The principal's duties necessarily extend beyond activities within the immediate school. His office as principal places him in a position of educational leadership in the community. Because of the close relationship of the school to the general social welfare, he is expected to participate actively in community movements and to work with community agencies for the betterment of conditions affecting youth. Active participation in community affairs enables him to widen his personal contacts with community leaders and thus to interpret the school program to them directly. The principal finds it necessary to keep informed with regard to current developments in education through a study of professional literature. Like men in other professions, he finds it necessary to be associated with his colleagues through local, state, and national professional organizations. Such associations prove a vital source of inspiration and professional information and enable him to contribute to the professional understanding of school problems. His personal contacts with supervisors, other principals, and other administrative personnel in the school system enable him more effectively to coordinate the junior high school with both the elementary school and the senior high school and to work more closely in harmony and cooperation with his colleagues.

Qualifications—Educational leadership implies a need for the highest personal qualities and professional qualifications obtainable. Educational ideals and ultimate objectives are intentionally set at an unattainable level, toward which all must strive. Evaluations of actual outcomes of education reveal them to be far short of the desired goals. The contrast between present and desired outcomes of education should be a challenge to teachers and principals alike. Leadership in the movement toward better schools, however, must be maintained by all principals, whether they are in the junior high school or in other divisions of the schools. The need for pioneering innovations in junior high schools places upon the

principal added responsibilities for increasingly effective growth and for more effective leadership of teachers. Not only must the principal be familiar with all the most effective present practices in education but he must be prepared to experiment and to develop new and better ways of understanding junior high school pupils and of directing their development along desired channels.

The qualifications needed to meet the manifold professional responsibilities of junior high school principals cannot be assured by the minimum training standards set by state certification agencies. Indeed, among the various states, there are no uniform certification requirements for junior high school principals. Obviously, principals need to have the broadest general academic and cultural training, particularly in the field of social sciences. Special training is also needed in administration, school law, school finance, and business administration, together with a broad, thorough training in all aspects of the general educational field. Obviously, too, the duties and responsibilities of the principal are such as to demand a broad experience background in teaching before he assumes supervisory responsibilities for all aspects of junior high-school work.

Salaries of principals should be commensurate with the qualifications required of the position. If men possessing the qualifications required by the principalship are to be attracted to this work the salaries should be adequate to hold them in the profession. Salaries for junior high school teachers and junior high school principals are shown in Table XXIV.

From Table XXIV, it is apparent that the highest median salary for principals is found in cities with a population over 100 000 and that the lowest is found in communities with populations ranging between 2 500 and 5 000. Among the data presented, there is observable a strong upward trend in salaries from smaller to larger cities. Such a salary differential tends to attract the more capable principals to the larger cities. It should be noted that the median salaries of teachers in large city systems is larger than the median salary of principals in communities under 10 000 population. On the whole the highest median salaries of principals (\$4 159) are inadequate to attract and hold the most highly qualified and the most capable men. Men of this caliber who remain in principalships must derive at least a part of their compensation from the satisfaction of service rendered to pupils and to the community.

THE TEACHER

Many of the major duties of junior-high-school teachers are presented in Chap VIII in connection with the discussion of teacher planning for instructional needs. In addition to regular classroom activities, every teacher has responsibilities to pupils, to the school as a whole, to the education profession, and to the community.

TABLE XXIV—MEDIAN SALARIES OF THE JUNIOR-HIGH SCHOOL TEACHERS AND PRINCIPALS, 1930-1931 AND 1938-1939, ACCORDING TO SIZE OF CITIES*

Size of city	Teachers' median salaries		Principals' median salaries	
	1930-1931	1938-1939	1930-1931	1938-1939
2,500- 5,000	\$1,360	\$1,283	\$1,775	\$1,579
5 000- 10 000	1,494	1,387	2,184	2,025
10 000- 30 000	1,619	1,589	2,763	2,667
30 000-100,000	1,860	1,843	3,353	3,215
Over 100 000	2 348	2,450	4,500	4,359

* NATIONAL EDUCATION ASSOCIATION. *Salaries of School Employees. Research Bulletin*, Tables 2 to 6 pp 70-74. March, 1939.

Duties and Responsibilities—The teacher's responsibility and relationship to his pupils grow directly out of the developmental needs of pupils and of society. A large part of these needs, both for society and for the individual pupils, may be met through group instruction in the regular program of the school. But individual differences among pupils are so great that these may not be met adequately by group-instructional methods unless such methods are strongly supplemented with individualized attention. This tenet has been emphasized throughout the present volume. It implies two added responsibilities of the teacher: knowledge and understanding of the abilities, interests, and needs of pupils in relation to their home backgrounds, and participation in the coordinated efforts of the school to meet individual differences among pupils through differentiated instruction and through the special services of the school. This broader concept of the responsibilities of teachers emphasizes the importance of a friendly interest in pupils, conditioned by an intelligent, sympathetic understanding, for it is only through intimate person-to-person relationship that the teacher can inspire and encourage pupils to put forth their best efforts, even in a modified program with special service features.

A teacher's acceptance of a position in a junior high school implies the acceptance of certain responsibilities to that school as an agency of the state in the local community. Chief among these is loyalty to the school and to its administrative officers. The loyalty expected of teachers is both personal and professional. Personal loyalty involves, among other things, a responsibility in building a strong morale and a spirit of loyalty among both pupils and other teachers. Professional loyalty involves a willingness to implement the policies of the principal in the interest of the school. Loyalty to the school implies, further, a willingness to cooperate with all personnel in a friendly endeavor to promote the general objectives of the school.

Entrance into the teaching profession carries with it a strong obligation for loyalty and support of the profession through its recognized state and national teachers' organizations. The social status and professional prestige of teachers in modern education have risen to an unprecedented level. This rise has been caused in part by a selection of better qualified personnel, in part by a wider public appreciation of the value of education, with a concomitant willingness to pay higher salaries, and in part by professional organizations that are continually striving to raise the ethical and professional standards of persons engaged in teaching. Membership in professional teacher organizations and attendance at professional meetings give formalized expression to the teacher's desire to render unselfish service, to keep abreast of the times, to help in the improvement of the profession, and to gain inspiration from association with other teachers and from membership in a professional organization.

The school as a social institution is an agency of the state, created for specific educational purposes. Teachers are employed as representatives of the state serving in this institution. In this capacity, they necessarily assume obligations to fulfill responsibilities in the interest of the community and the state. Community conditions and the influences of conditions demand the coordinated efforts of many persons and agencies in movements directed toward the betterment of community life. Membership in the teaching profession carries with it an obligation to participate actively in such movements. Furthermore, it implies familiarity with community conditions and influences and the exercise of the duties and privileges of citizenship. Not only does the community expect social leadership of its teachers but the responsibility to pupils is

more effectively realized when teachers regard the duties of citizenship seriously and show interest, pride, and leadership in community affairs

Qualifications—The schools in a democracy must have teachers who are qualified to train pupils in and for democracy. This implies a willingness not only to accept responsibility for discharging obligations to pupils, to the school, to the profession, and to the community but also to practice the democratic way of life as an example for pupils. The varied aspects of the teacher's life and work place him in a particularly important position that calls for insight into the needs of society, as well as into the needs of pupils, and for an ever increasing ability to solve the general problems of the school. The qualifications of persons needed to meet these many duties and responsibilities are necessarily of the highest order.

Education—The formal educational qualifications for teaching are gradually being raised throughout the nation. Today most states demand a minimum of 4 years of liberal arts education as a part of the requirements for teacher certification. In addition, each state has established minimum professional requirements that candidates must meet before credentials are granted. These usually involve the completion of 18 semester hours of work in specific courses in education. Desirable preparation for all junior-high-school teachers includes basic work in the social and biological sciences, in the growth and development of children and extensive knowledge of the junior high-school age. This knowledge may be gained in part through a study of psychology and in part through experiences with children. Although a broad cultural training is needed by all junior high school teachers, a certain degree of specialization is desirable. Usually adequate specialization may be achieved by fulfilling an academic major in one or more teaching fields. Because of the nature of junior high-school instruction, however, a high degree of specialization in one or two subject fields is not so important as a broad training in several related fields.

Personal Qualities—A broad concept of the duties and responsibilities of teachers places increasing emphasis upon personal and social qualities in addition to essential liberal and professional training. No rigorous analysis may be made of personality traits and qualities that are needed for successful teaching, but a number of studies have attempted to discover some of the more important characteristics that contribute to successful teaching. One of the more comprehensive of these studies was made by Charters and

Waples¹ Although it is often difficult to apply trait names to teaching activities, many of the traits suggested by Charters and Waples have meaningful bearing upon teacher-pupil relationships. In this study, six of the most frequently mentioned traits desirable for junior-high-school teachers are attractiveness, considerateness, cooperation, enthusiasm, forcefulness, and good judgment.

TABLE XXV—REASONS FOR LIKING "TEACHER A" BEST, ARRANGED IN ORDER OF FREQUENCY OF MENTION, AS REPORTED BY 3,725 HIGH SCHOOL SENIORS*

Reasons for liking "Teacher A" best	Frequency of mention	Rank
Is helpful with schoolwork, explains lessons and assignments clearly and thoroughly, and uses examples in teaching	1,950	1
Cheerful, happy, good natured, jolly, has a sense of humor, and can take a joke	1,429	2
Human, friendly, companionable, "one of us"	1,024	3
Interested in and understands pupils	937	4
Makes work interesting, creates a desire to work, makes classwork a pleasure	805	5
Strict, has control of the class, commands respect	753	6
Impartial, shows no favoritism, has no 'pets'	695	7
Not cross, crabby, grouchy, nagging, or sarcastic	613	8
'We learned the subject'	538	9
A pleasing personality	504	10
Patient, kindly, sympathetic	485	11
Fair in marking and grading, fair in giving examinations and tests	475	12

* HART, FRANK W. *Teachers and Teaching* part of Table I p. 131 The Macmillan Company New York, 1934.

Many of the important qualities of good teachers, as determined by pupils themselves, are found in a study of teachers and teaching that was made by Hart. In a summary statement relative to the reasons why pupils like teachers, Hart says, "The most valid teachers' rating card—self-rating card—in existence today is a composite picture of 'Teacher A'."² In this study the 12 most

¹ CHARTERS, W. W., and WAPLES, DOUGLAS. *The Commonwealth Teacher training Study*, University of Chicago Press Chicago 1929.

² HART, FRANK W., *Teachers and Teaching*, p. 144, The Macmillan Company, New York, 1934.

frequently mentioned reasons for liking "Teacher A" (the best liked teacher) are shown in Table XXV

In a further effort to interpret and summarize the qualities and traits needed for successful teaching, many check lists have been prepared. An effective check list of personality qualities has been presented by Schorling.¹

Any analysis of teacher traits must inevitably fall far short of the total personality of persons who are, or who may become, successful teachers. Observations of teachers in practical classroom situations commonly reveal characteristics that are not uncovered by check lists or trait analyses. At present, there is no certain way of describing these less tangible total qualities that are truly characteristic of the good teacher. Although the possession of traits that are characteristic of good teachers will, on the average, prove advantageous to prospective teachers, it must be remembered that the total personality quality that is achieved through a balance and integration of traits is the critical factor in all personal relationships.

The preceding discussion has presented briefly certain responsibilities and qualifications of junior high school teachers. The attention of the reader is directed to other sections of the present volume for discussions of the role of the teacher in guidance, in extraclass activities, in the library, in administration, and in interpreting the school to the public.

THE ATTENDANCE OFFICER

Accurate and adequate records of attendance are of basic importance in the administration of every public school. School funds are commonly allocated on the basis of the average daily attendance of pupils. Compulsory attendance regulations place upon the principal the legal responsibility for adequate accounting. Systematic, thorough records of attendance encourage pupil habits of regular attendance, promptness, and dependability and hence diminish truancy and delinquency. Parents are legally responsible for the attendance of pupils in school, but without adequate attendance records and close cooperation between the school and the home, it is sometimes impossible to secure the regular attendance of pupils at school.

¹ SCHORLING, *RALPH Student Teaching* pp 315-319 McGraw Hill Book Company, Inc., New York, 1940

Although many city school systems have relatively uniform procedures of attendance accounting, often considerable responsibility for the development of these procedures is left to the initiative and resourcefulness of the individual principal.

Regardless of the specific forms and procedures used, the attendance-record plan should provide for (1) collecting attendance data for every pupil for each period of the school day, (2) recording data so that it is readily available to teachers and counselors, (3) reporting each absence to parents, and (4) receiving parental excuses for such absences. It is highly desirable that the attendance work of the entire school be centralized in one office. Such centralization promotes uniform records, relieves teachers of much clerical detail, and permits a closer coordination between the attendance office and the office of the school nurse.

When an effective record system is established, it may be operated in large measure by competent clerical help. In small schools, the principal is able to keep in fairly close touch with pupils who are absent. In large schools, however, it is necessary for a teacher or an administrative assistant to confer with pupils who consistently 'cut' classes or who are truant from school without parental knowledge or who present written excuses of questionable validity. In some schools, the responsibility for supervising the attendance department is delegated to the vice-principal or to the dean, in others, this work is done by a competent teacher as a part of his regular schedule. Because of the nature of the work involved in pupil accounting the person in charge must be systematic and methodical with pupil records, and he must maintain cordial relationships with both pupils and parents. Unless the person who supervises the attendance department is firm, fair, and tactful with both pupils and parents, he may disrupt entirely an otherwise smoothly and efficiently administered school.

THE COUNSELOR

Essential to the operation of modern junior high school education is an effective guidance program. Basically, the administration of the guidance program is a responsibility of the principal. However, the detailed and intimate nature of guidance work requires the services of specially trained and qualified persons. The responsibilities and relationships between various persons participating in the guidance program are described in Chap. V. Qualifications that are needed for successful counseling, regardless of the title

given to the position, involves, first of all, successful teaching experience. All that has been said heretofore about the education of the teacher, his background, and personal qualities applies to the teacher counselor. More than this, it is desirable for the counselor to possess additional professional training in such fields as educational tests and measurements, educational psychology and guidance, as well as foundational training similar to that required for professional social workers. Irrespective of the specific courses that a prospective counselor may have had, he must be able to collect data, interpret its significance, and apply the results with insight and discretion.

Successful counseling demands a high degree of tact and a willingness and ability to work effectively with teachers, administrators, pupils, parents, and community agencies. The counselor must be able to gain and hold the respect and cooperation of the entire faculty. He must possess such a broad view of the work of the school that personal preferences for, or prejudices against, either subjects or teachers will not influence his scheduling of pupils. Furthermore, he must be certain that the educational needs of individual pupils are not jeopardized in the common practice of arbitrarily equalizing class enrollments. The counselor needs a considerable amount of administrative ability to organize his work efficiently and to utilize and coordinate all school personnel and community agencies that are available and that may assist him with the actual work of counseling.

THE SCHOOL NURSE

The supervision of health occupies a place of increasing importance in modern junior high school education. In her supervision of the health of pupils, the school nurse comes in intimate personal contact with pupils, with the attendance office, with teachers, counselors, parents, parent-teacher organizations, the public health department, the medical profession, social agencies, and various service and character building agencies of the community. In some communities, the school nurse is employed solely by the board of education in which case her entire time is devoted to schoolwork. In other communities, she may be employed part time by the board of education, part time by city or county health department, by clinics or other health agencies, in which case her time is divided accordingly. Many communities have a generalized public-health nursing service. Under this plan each nurse does all types of pub-

lic health nursing within her own district, such as schoolwork, communicable-disease work, prenatal, maternity, and infant-welfare work. But regardless of the employing agencies, the school nurse works directly under the principal and is also responsible to the city or county health department.

Duties and Responsibilities—More important than the routine duties of the school nurse, such as administering first aid, weighing and measuring pupils, testing vision, and assisting the school physician, are her coordinating activities with all departments of the school and with agencies in the community in the interest of the health of individual pupils and of the general public health. In the fulfillment of these general responsibilities, the nurse must work in close cooperation with the attendance office by checking with the home on causes of pupil absences that are of more than three days' duration and by inspecting all pupils returning to school after illnesses. One of the most important objectives of the nurse in this attendance work is to prevent the spread of communicable diseases. The nurse is the direct representative of the public health department in the school and may be a deputized public health officer. She excludes all suspicious cases of communicable diseases and reports them to the proper health authorities for follow up and control. The school nurse thus must work in close cooperation with the health department by helping in the control of communicable diseases, in emergencies, and by being constantly alert to the sanitary and health conditions in the school and community.

An effective health program in the school demands the close cooperation between the nurse and every teacher in the building so that there may be a more widespread detection of early symptoms of communicable disease and of physical defects that may be referred to the proper authorities. The nurse is likewise responsible for keeping teachers informed about the health condition of all pupils who require special consideration. Not infrequently teachers are unaware of the temporarily weakened physical condition of returning convalescents and are also unaware of the nature of the common sequelae of communicable diseases. Teachers should have free access to the health record cards of all pupils and be familiar with the code used so that they may interpret and understand better the physical and health status of pupils. Today it is not considered good practice for the nurse to give health talks in the classroom, rather it is the nurse's place to furnish and supply the teacher with information and materials for such talks so that health instruction

may be coordinated with other subjects. A file of up-to-date source materials for health teaching is of great value to the teacher and should be maintained by the nurse.

The nurse should welcome and encourage conferences with parents. The medical examination given by the school physician offers an opportunity to invite the parent to the school for consultation. A further vital aspect of the function of the school nurse is found in her cooperation with counselors. In her contacts with parents and the home, the nurse, by the very nature of her calling, often becomes the intimate confidante of the family and is therefore able to understand and interpret problem situations to the school personnel.

The parent-teacher association can be of great assistance to the nurse by providing aid in many ways to needy children. The nurse should present current data of health interest in the community to the parent-teacher organization, thus keeping the organization informed and enlisting their active support in her health program. Furthermore, the nurse should be cognizant of the work of all social agencies within the community so that she may refer needy pupils to the proper sources for assistance. In large communities, a social-service clearing center is maintained. Through this exchange, the school nurse can obtain full information pertaining to assistance given to pupils in the past. Many service clubs have a child welfare committee that is glad to cooperate with the school nurse. From such organizations, the nurse is often able to obtain funds for the use of needy children who are ineligible for aid from social agencies.

Qualifications—The responsibilities and duties of the school nurse in the complex urban school environment of today demand the services of a person highly qualified professionally. Standards for the nursing profession have been raised greatly during recent years. Practically all accredited schools of nursing require one or more years of college work for entrance. After completing the regular hospital training course, the well-qualified public-health nurse must have completed successfully a graduate year of public health training at a university. The public health nursing course includes work in such fields as educational psychology, social case work, the administration of the school health program, vital statistics, and public speaking, as well as supervised practice in general public-health and school nursing comparable to the practice teaching required for teaching credentials. Further, in most states the nurse must pass a rigorous state board examination before being granted

the public-health nursing certificate by the state department of public health. Then, in some states, in order to do school nursing, the health and development credential must be granted to the nurse by the state department of education.¹ Many universities offer a combined five-year course in nursing, after which the nurse may specialize in public-health nursing.

Of equal importance with the extensive professional training of the public health school nurse are her personality qualities. In general, the personality characteristics that are essential for successful teaching are likewise essential for the school nurse. Of particular importance, however, are her tact, her radiant health and physical appearance, her knowledge, and broad and sympathetic understanding of the physical and health problems of maturing boys and girls.

THE COORDINATOR OF EXTRACLASST ACTIVITIES

The recognition of extraclass activities as a complementary aspect of the total educational program of the junior high school has created a need for a teacher-coordinator to serve as director, supervisor, or chairman of extraclass activities. Because the title "coordinator of extraclass activities" is more descriptive of the actual work of the position, it is preferred to other titles.

The duties, responsibilities, and qualifications of the coordinator of extraclass activities and the relationships that exist among sponsors, counselors, and the coordinator are discussed in Chap. IX.

THE LIBRARIAN

The newer cooperative planning and preparation of instructional materials, the increasing emphasis being placed upon recreational or leisure reading, the enlarged concepts of the contributions of the library as a museum and as an objective-aud center all emphasize important new duties and responsibilities of junior-high-school librarians. These factors, together with the desirable qualifications of librarians, are discussed in Chaps. X and XI.

SECRETARIAL STAFF

The successful routine operation of the school depends very largely upon an efficient secretarial staff. In addition to the respon-

¹ CALIFORNIA STATE DEPARTMENT OF EDUCATION, *Requirements for the Health and Development Credential for the School Nurse, Regulations Governing Granting of Credentials and Certificates for Public School Service in California*, Bulletin 12, June 15, 1935, Sacramento, Calif.

sibilities of the school secretary in interpreting the school to the public, she has many other duties to perform for the principal and the school. Among these various duties are maintaining systematic records and files, keeping up to-date inventories and ordering school supplies, making official reports, keeping the appointment calendar for the principal, and handling official correspondence for the principal and faculty.

An almost infinite number of trivial and major problems arising out of intimate human relationships are brought to the principal's office for solution. There are times when the emotional strain and tension of teaching ruffle the dispositions and tempers of teachers who have problems to discuss with the principal. Parents may come to school in a disturbed frame of mind, pupils may feel that they have been unfairly treated and report their grievances, and even the principal may feel the strain of annoying details in a long hard day. The school secretary must serve as an effective intermediary in all these personal conflicts. Here she is called upon to render an intangible but nonetheless significant service in the smooth operation of the entire school. The very nature of her office as a clearing house for personal problems and conflicts makes the secretary a confidante of many people. Confidences must be tempered by her responsibility to keep the principal informed regarding the many internal details about the school. She must distinguish between trivial routine matters that she can settle and the more important problems that she must refer to the principal or to administrative assistants for disposition.

The qualifications for a successful school secretary include, of course, a thorough secretarial training, preceded preferably by a four year liberal arts course. Of basic importance are her personal appearance, her disposition, her ability to meet the public, her friendliness, and her interest in and understanding of boys and girls of junior high school age.

THE CAFETERIA MANAGER

The school cafeteria is an essential service of the modern junior high school. When adequately equipped, conveniently arranged, and efficiently managed, the cafeteria can add greatly to the well-being of the entire school. To be sure, its main function is to serve wholesome, well balanced, well prepared, appetizing meals at a price that will attract pupils and faculty. But the cafeteria may become a valuable aid to the instructional program of the school.

when it is coordinated with the regular foods classes, and it may contribute further to school activities in connection with recreational and social programs

The degree to which the cafeteria serves the general program of the school depends considerably upon the managerial policies and particularly upon the cafeteria manager. There are two general plans commonly used for the management of the cafeteria. In one, the foods teacher has a portion of her day scheduled for the management of the cafeteria, in the other, a full time manager is employed for this purpose. In either case, the cafeteria manager should have had practical managerial experience in a public dining room or tea-room. When a full time manager is employed, it is highly essential that she also have a knowledge of dietetics.

The use of pupil assistants in the cafeteria is a commendable practice, for it not only provides valuable practical experience and financial assistance for needy pupils but reduces the total operating costs of the cafeteria. It is, of course, extremely important that all money and materials handled by pupil assistants be so systematized that temptation for dishonesty is removed.

THE CUSTODIAN

The modern school plant that is designed to carry out the full educational program of the junior high school requires efficient care and maintenance. The day of the untrained, untidy janitor who did little more than fire the furnace, sweep the floor, and wash the windows is past. Today, supplanting him is the well trained, capable, efficient custodian who is responsible for the effective operation of the entire school plant. Usually his responsibilities include the operation and maintenance of modern heating plants, electrical equipment, plumbing, and of the general sanitation and safety of the building. Although he may not be skilled in all of the operations for which he is responsible, he does need a practical working knowledge of them, and he needs an administrative ability sufficient to select, train, and direct an efficient corps of assistants.

The custodian is expected to keep himself informed of the rapid developments and constant changes in professional and service equipment for school plants. He is expected to know the standardized techniques of cleaning processes and to use all the best methods of care and maintenance for the entire building. Toward this end many school systems have instituted classes for the improvement of their building-service personnel. Frequently the custodian and his

assistants are selected on the basis of civil-service examinations given by the community

The number and types of the custodian's assistants vary according to the size of the school. Even in small junior high schools, it is desirable to have at least one matron who maintains sanitary conditions in the faculty women's lounge and the girls' lavatories. The matron should be neat and clean in appearance, alert in manner, and kindly and motherly in her relations with the girls of the school.

Good custodians may be very valuable to the school not only for the efficient service they give in the maintenance and care of the plant but also for the influence that they have over pupils and for the many small services that they are able to render an appreciative faculty in creating more pleasant working conditions for them. Furthermore, the cleanliness and tidiness of the school plant are the custodian's contributions to the public relations program of the school.

SUMMARY

The principal is the legal head of the school and is personally responsible for its prudential administration and for its educational efficiency. Of necessity, the principal must select suitable personnel and assign definite duties to them, preferably under the democratic plan of school administration, in which he may exert personal and professional leadership.

The trends in modern education are toward an ever-widening scope of duties and responsibilities for administrative and teaching members of the educational profession both in and out of school. The increased social and educational responsibilities demand correspondingly higher qualifications for various positions in the junior high school. The new service functions demand more highly specialized personnel in certificated and in noncertificated positions. There are two important aspects in the work of each member of the school staff: one is the efficient fulfillment of specific responsibilities assigned, and the other involves the friendly cooperation of all members of the staff in a sense of shared responsibility for the general welfare and efficiency of the school.

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CHAPTER XIV

DEMOCRATIZING SCHOOL ADMINISTRATION

It is generally agreed that democracy in school administration is essential for the schools in a democracy¹ There are three important aspects of democracy in school administration one involves democratic practices primarily affecting professional relationships, another involves democratic practices directly affecting pupils, and the third involves democratic relationships between the school and the community

Educational planning such as that suggested in Chap VII requires democratic professional relationships In like manner, the operation of an effective extraclass activities program, such as that suggested in Chap IX, requires the cooperative efforts of both faculty and pupils Similarly, the cooperative democratic endeavor of the community and the school provides more effective school plants and programs and promotes the realization of the educational objectives of the school

The principal is legally responsible to the superintendent of schools, the board of education, and to the community for the administration of his school Democracy in school administration does not imply a surrender of legally delegated authority and responsibility Any plan of teacher, pupil, and community participation in administration without adequate checks and limitations may result in as many undemocratic practices as would be exercised by an autocratic principal, and it may result in chaos and confusion

The kinds and degree of participation in administration will depend upon the conditions in a particular school at a given time Inflexible plans formulated for teachers and pupils tend to defeat the purposes of participation, for the process of democratization is an essential part of democracy Under most circumstances, it would seem wise to begin democratization modestly and to build as rapidly as sure footing can be established A principal who is a

¹ NATIONAL EDUCATION ASSOCIATION EDUCATIONAL POLICIES COMMISSION, *The Unique Function of Education in a Democracy*, 129 pp, Washington, D C, 1937

true leader will not be afraid of experimentation, in fact, this is about the only way by which he can determine the kinds and degree of participation suitable for the school and community. In this process, the principal should exemplify the type of leadership that welcomes, encourages, and provides for free and intelligent participation in the formulation of policy and in the management of the school by teachers, pupils, and laymen.

TEACHER PARTICIPATION IN SCHOOL ADMINISTRATION

For teacher participation in school administration, it is necessary to have some plan definitely formulated. Whatever form this plan may take, it must be evolved democratically, and it must be flexible. Care should be taken to prevent the plan from becoming so crystallized that suitable changes cannot easily be effected when occasion demands. There is always the danger that the functioning of any organization will become routine and perfunctory. Frequently it is difficult for large numbers of teachers to take part personally in administrative affairs, but there must be active participation by faculty representatives of various teacher and school interests at all times.

Although a fairly well-defined structural plan is presented in the following paragraphs, it should be remembered that there is no intention of recommending its adoption in its entirety for any junior high school. The proposed organization embodies guiding principles that may be modified so as to conform with local requirements. The plan is presented in some detail in order to show the various important relationships and functions of possible committees.

The basis of the plan is the general faculty meeting, which in itself serves effectively for relatively small faculty groups. The large faculty is obviously too cumbersome to function completely as a total group. It is therefore necessary for the faculty to delegate responsibility for the intensive investigation and consideration of problems to smaller groups of the faculty. The plan suggested here consists of general standing committees created by the faculty and of a committee on committees elected by the faculty to appoint the membership of standing committees. Parallel to the committees of the faculty is the administrative council, which supplements the general faculty and its committees.

The General Faculty Meeting—The functions of the general faculty meeting are primarily three. The first of these is to provide an opportunity for the preliminary consideration of administrative

problems and other matters of general school welfare. Competent disposal of such problems may require committee study and report before final action is taken by the faculty. The second function is to deal with matters of professional concern, in the consideration of which the entire faculty should participate. Reports of delegates to local, state, and national meetings will occasionally be the order of business. At other times, discussion may center around problems referred to the faculty by teacher organizations. Or faculty members may present reviews of recent books or articles dealing with general professional problems, thus promoting in-service growth. The leadership of the principal is an extremely important factor in developing keen professional interest and *esprit de corps* in the faculty. The third function of the general faculty meeting is to give the principal an opportunity to explain or discuss various problems. Thus the principal may interpret new policies or regulations that emanate from the local or state superintendent's office, or he may review and interpret the philosophy of the school and the objectives toward which all are working.

The leadership of the principal in the general faculty meeting is an important part of effective participation of teachers in the administration of the school. Without capable leadership on the part of the principal, no plan of teacher participation in school administration can be effective.

Committee on Committees—The committee on committees consists of three classroom teachers who hold no administrative positions in the school and who are elected by popular vote of the entire faculty. One member of this committee is elected each semester and holds office for a term of three semesters. The committee chooses its own chairman. The sole function of this committee is to appoint the personnel of all general and special committees, with the exception, of course, of *ex officio* members.

General Faculty Committees—The faculty in its general meeting creates standing committees of sufficient number and type to deal with various faculty problems. The term of office of all general committees is normally one semester. It is suggested that, with obvious exceptions, each committee choose its own chairman. Faculty problems of a recurring or relatively continuous nature may be assigned to appropriate general committees. Ten commonly created general committees are presented in Table XXVI. This table indicates the names of committees, the membership of each committee, their most important functions, and possible relation-

TABLE XXVI—GENERAL FACULTY COMMITTEES

Name of committee	Faculty membership	Functions	Interrelationships
Instructional planning	Faculty as a whole with various subject-area subcommittees membership determined by size and needs of school	<ol style="list-style-type: none"> 1 To discover and interpret pupil and school instructional needs 2 To review and adapt instructional plans to local needs 3 To coordinate all instructional activity 4 To cooperate with city wide instructional committees 	<ol style="list-style-type: none"> 1 Community groups 2 Specialists 3 Various divisional and city wide planning and production committees
Library	3-5 (librarian, ex officio)	<ol style="list-style-type: none"> 1 To assist librarian in (a) the selection of needed instructional material (b) improvement of library services, and (c) to broaden the scope and usefulness of the school library 2 To assist school in interpreting to the public the library and its functions 	<ol style="list-style-type: none"> 1 1 or 2 pupil members 2 1 or 2 lay members 3 Representation of instructional planning committee
Indoor traffic	3-5 (sponsor of indoor traffic, ex officio)	To help with the planning and direction of indoor traffic	<ol style="list-style-type: none"> 1 Pupil police chief 2 1 parent
Cafeteria	3 (cafeteria head ex officio)	To assist cafeteria head in determining policies with regard to choice of foods and the improvement of general service	<ol style="list-style-type: none"> 1 1 pupil member 2 1 mother
Calendar	5-7 (coordinator of extracurricular activities as chairman)	To build the calendar of all school events outside regular classes	<ol style="list-style-type: none"> 1 Boy and girl presidents of student council, ex officio 2 Several community leaders
Dance	3-4	<ol style="list-style-type: none"> 1 To lay general plans for pupil dances 2 To assume general responsibility for their execution 	<ol style="list-style-type: none"> 1 1 boy and 1 girl pupil 2 1 or 2 parents 3 Faculty social committee
School and home	6-8	<ol style="list-style-type: none"> 1 To coordinate efforts of teachers and parents in the interests of pupils 2 To plan for open house and American Education Week 3 To assume responsibility for evening programs for parents such as the P.T.A. and Dads' Clubs 	<ol style="list-style-type: none"> 1 P.T.A. and Dads' Club representatives 2 1 boy and 1 girl from student body 3 On occasions may need assistance of library, dance and faculty social committees
Faculty welfare	3	To study and plan for the improvement of general conditions affecting the welfare of faculty members, both personal and professional, such as working conditions, illnesses, bereavements	May need help from school and home committee
Faculty social	5	To plan and carry out social events for faculty	School and home committee may cooperate
Professional improvement	3	<ol style="list-style-type: none"> 1 To collect information from all possible sources including members of faculty concerning current books and articles that may be of value to the faculty and to compile such material for the use of faculty 2 To make available information concerning community events, plays, musical events, forums, etc. 3 To recommend to the librarian the purchase of materials for the teachers' professional library 	Library committee may assist

ships with pupils, laymen, and other committees. In column 1, the names of suggested committees are presented. Local problems and needs may dictate other committees. Their general relationship, however, will be like those shown in this table. In column 2, the number of members and the ex officio members are indicated. Ex officio members are needed to ensure the help and advice of persons who are closely connected with the activity for which the committee was created. The number of members indicated is arbitrary and should be left to the discretion of the committee on committees. Column 3 suggests the main functions of each committee but here again, these may vary with local needs. Column 4 indicates the possible relationships that each committee may have with pupils or lay groups or both. It should be noted that committee interrelationships are suggested for the faculty, social, professional improvement, instructional planning, and library committees.

Occasionally problems will arise in the administration of the junior high school that need immediate and temporary consideration by the faculty. The nature of such problems may be unrelated to the work of the general committees. These problems may be assigned to special faculty committees.

Administrative Council.—The administrative council membership is all ex officio and includes administrative officers, counselors, and sponsors of pupil governmental activities. The presiding officer of this group is the principal.

The administrative council has three main functions: (1) to serve as an effective coordinating body, (2) to care for the numerous administrative details that are of little concern to classroom teachers, and (3) to check and limit teacher participation in matters that are governed by conditions outside of teacher control.

Coordination is always needed for the effective work of special groups representing a large democratic body. In the present plan for teacher participation in the administration of the school, this coordination is performed by the administrative council. Because of the position held by the members of the administrative council, it is logically responsible for considering the welfare and progress of the entire school, and its coordinating work may be considered that of a balance wheel for the entire committee organization.

Four aspects of the coordinating function of the council deserve mention. The first is that of preventing duplication of work among committees. In large schools where many committees are at work,

there is danger of unnecessary duplication unless there is some group responsible for coordinating committee efforts. The second is that of rendering professional help and advice to committee members or to whole committees. It cannot be expected that all committees will be able to solve the problems assigned them without outside help. The third is that of coordinating and interpreting administrative policies and regulations and relaying information about them to the various committees or to the general faculty. The fourth is that of considering committee progress reports and relaying the results of such deliberation to committees concerned.

Administrative Detail—It would be undesirable under any type of administration to burden teachers with many details and routines of administration. It is therefore the business of the administrative council to dispose of two aspects of administrative detail with which teachers are not immediately or primarily concerned. The first of these involves such matters as building and equipment changes and modifications of record systems. The second involves disposition of certain details that may grow out of public relations. Among these may occur requests originating in the community, or there may occur school-environment problems that are of direct concern to the school.

Checks and Limitations—A democratic organization seeks to operate with as little restriction upon its individual members as possible. Yet at times there must be of necessity some checks and limitations upon one group by another group. A democratic administrative organization for the school is no exception to this principle. Teacher participation in school administration is restricted by such factors as the budget, legal regulations, and scheduling limitations. The administrative council therefore restricts certain activities of a teacher committee because of costs involved in a proposed project, however desirable it may be. Likewise, rules or regulations from sources higher than the individual school may forbid certain activities, and the council must enforce such legal provisions. Finally, the schedule of activities of the school is sometimes a source of limitations. Frequently certain desired features of the schedule may prevent other desirable features from being incorporated. It is the function of the administrative council to weigh the various desired features of the schedule and to incorporate into it the best features.

Value of Teacher Participation—The plan of faculty participation through committee organization depends for its efficacy upon

cooperation of all groups and upon the patient and intelligent leadership of the principal. The benefits that accrue from successful participation in administration include the promotion of (1) mutual confidence and understanding between the administration and teachers, (2) self-confidence on the part of teachers, (3) valuable service to the school by teachers with initiative and creative ability, (4) professional knowledge and growth on the part of teachers, and (5) closer cooperation with the community because of faculty unity.¹ Finally, teacher participation develops loyalty to the school, promotes understanding of its needs, encourages cooperative endeavor, and stimulates responsibility.

PUPIL PARTICIPATION IN SCHOOL ADMINISTRATION

Pupil participation in the management of school affairs is essential to democracy in administration and provides a laboratory for practice in democracy within the immediate school community. We are training pupils for citizenship and for democracy, but we should also train them in citizenship and in democracy. For adequate training in democracy, we cannot depend upon books and democratic classroom procedures alone. The faith that we place in books as a means to this end is a recognition of only a part of the whole process. Courses in social studies contribute to training for citizenship, but until pupils are given real opportunities to participate in the conduct of their school community, the training is only partially accomplished. Thus the two basic purposes of pupil participation are (1) to foster the development of a belief in and an intelligent understanding and appreciation of the democratic theory of government and of democratic processes, and (2) to establish habits and skills of participation through a laboratory of practice in democracy within the school community. Because of its instructional value, pupil participation in various phases of school administration should be considered an integral part of the total program of the junior high school, and whatever means are required for effective widespread participation of pupils should be provided.

In making provisions for pupil participation in administration, every effort should be made to achieve simplicity and effectiveness of organization. Through their understanding of the sources and evolutionary form and function of adult governmental procedures,

¹ Adapted from MATZEN, JOHN M., and KNAPP, ROBERT H., 'Teacher Participation in School Administration,' *American School Board Journal* Vol. 97 pp. 27-28, October, 1933.

pupils should be encouraged to develop an organization that is adapted to their particular needs. Pupil organizations that are blindly patterned after adult civic organizations seldom contribute adequately to the organizational needs of pupils. Regardless of the nature of the organizational forms used for this purpose, there should be adequate faculty direction of pupil activities to ensure optimal instructional outcomes and to ensure an effective check over administrative procedures.

An effective plan of pupil participation in school administration embodying essential organizational principles consists of the student-body organization with two councils, two courts, and two traffic organizations. The officers of the student-body organization are president, vice-president, and secretary. In order to give boys and girls an equal opportunity to participate in the organization, it is desirable to have a set of boy officers and a set of girl officers. It is likewise desirable to establish two student councils, the boys' council takes the place of a boys' league, and the girls' council fills the need for a separate girls' organization.

The student-body presidents preside over their respective councils and share responsibility for conducting assemblies. Both are also *ex officio* members of important committees, such as assembly planning and social-events committees. In addition, the presidents supervise elections and preside over out-of-school programs in which pupils participate. Vice-presidents should share in the responsibility for presiding over meetings and they may also be chairmen of important committees. In addition to their usual responsibilities, secretaries keep the activities bulletin board up to date. This bulletin board shows the daily meetings of all extraclass activities.

Nomination for student-body offices is by pupil petition supplemented by the signature of the principal or the counselor, the homeroom teacher, or by the approval of the student council. The requirements of official approval of candidates for office help pupils realize that they must focus their attention upon desirable qualities of leadership and select candidates on the basis of fitness for office. Candidates should be chosen from among the best pupils available and should show promise of serving the school on a high level.

Election of student-body officers is by popular vote of the entire student body each semester. Eligibility to vote is based upon school registration, student-body cards should not be required for voting.

Student Council—The student council should represent the entire student body. If the school has an effective homeroom plan, election of homeroom delegates, a boy and a girl, to the councils ensures representation of a cross section of pupil levels and interests. The homeroom teacher thus has an opportunity to promote discussions of duties and responsibilities of council delegates. If the school has no effective homeroom organization, various other plans of representation may be adopted. In any case, the plan should be wide enough in scope to provide a functioning group of pupils of such a character that the student body will be interested in the work of the council because of the participation and weekly reports of their delegates.

The boys' council and the girls' council may meet regularly on alternate weeks. The two councils, however, may meet jointly for the consideration of common problems. The business of the councils includes (1) appointing various committees, (2) approving petitions of candidates for office, (3) making plans for school activities, such as assemblies, dances, and social functions, (4) initiating needed changes in the constitution and by laws to be referred to the student body for discussion, and (5) discussing and making recommendations for general school improvement, such as care of grounds and building, and assembly and fire-drill routines.

The council should inform the principal of their activities, they may invite him to participate in their deliberations, or they may appoint joint committees to discuss problems with him or with the administrative council. Representatives may bring suggestions to the councils from their constituents for discussion. Teacher-sponsors of groups that have representation on the council should encourage the representatives to inform their groups of council deliberations.

The success of the councils depends to a large degree upon the persons who serve as faculty sponsors. These sponsors must be capable teachers, esteemed by pupils and interested in pupil activities from the point of view of pupils and of the general school welfare. Sponsors should not vote and should not use their positions to control the council except in rare instances. Their function is to assist, teach, and guide councils in conducting their meetings effectively, in accordance with accepted parliamentary practice. Good sponsors are always good teachers, stimulating thought in pupils and helping them to arrive at their own conclusions rather than forcing ready-made decisions upon them. The properly planned

and directed council is an excellent medium for building school morale, for contributing to efficient administration, and for laboratory teaching of citizenship

Student Courts—Through their classroom study of the forms and functions of government, pupils are led to understand and appreciate the need for courts in society. The junior high school courts supplement this understanding and appreciation by providing a laboratory in which pupils may improve the general conduct of their immediate society. The particular form of court organization should be adapted to the local school and should be evolved as pupils develop in their abilities to conduct courts. It is advisable to have a lower court and a supreme court.

Lower Court—An effective lower court organization for junior high schools consists of two pupil judges, a boy and a girl, a jury of five pupils, a bailiff, a clerk, and a faculty sponsor. The appointment of the judges and jury is made every semester by a joint committee of seven faculty members and the six student-body officers. The faculty members include the principal, the coordinator of extraclass activities, the sponsors of the two student councils, the sponsors of the court and of the indoor and the outdoor traffic organizations. The bailiff and the clerk are appointed by a committee consisting of the court sponsor and the judges. To have a boy judge and a girl judge is advantageous, because the two may share responsibility in the conduct of the court by serving alternately as presiding officers and as consultant and because the court may convene even though one judge is absent from school.

The number in the jury should be uneven. Five is advisable for speed and efficiency in court procedure. The jurisdiction of the court covers such offenses as violation of indoor and outdoor traffic regulations and general misconduct in the building on the grounds, and on the road to and from school. The court has no jurisdiction over classroom conduct or teacher pupil relationships.

The court procedure should be a modified adult-court procedure adapted to junior high school pupils. Both the defendant and the court may make use of pupil attorneys and witnesses.

Supreme Court—In the event that the defendant is displeased with the decision of the court, he may appeal his case to the supreme court. The officers of the supreme court are the principal, who serves as judge and the bailiff and the clerk of the lower court. The appellate status of a case must be granted by the lower court after the written request of the defendant has been reviewed. In bearing

an appellate case, the principal judge conducts the supreme court in the regular courtroom under regular court procedures, with all the lower court members present

The principal should carefully review all the evidence on both sides of an appellate case and should render a fair, unbiased decision, even though this may reverse the decision of the lower court. By maintaining a judicial atmosphere in his court, the principal may set a high standard of conduct for pupil-officers of the lower court and thus increase the confidence and respect of all pupils in court procedures. When the lower court has been properly evolved and is ably sponsored, there will be few occasions for appeal to the supreme court.

Indoor Traffic Organization—It is desirable to have a pupils' indoor traffic organization to expedite the flow of traffic between class periods and during fire drills and to promote good conduct, courtesy, and safety in the halls and on the playgrounds. The indoor traffic organization offers an excellent opportunity for pupils to assist in the development of proper attitudes and habits among all pupils.

The indoor traffic organization consists of the chief of police, captains, and subordinate officers. The chief of police is appointed by the committee that appoints the judges and jury of the student court. The number of officers depends upon the enrollment of the school and the plan of the building and grounds. Besides their general supervision and direction of traffic, these officers issue court citations to pupils who seriously violate traffic laws or playground rules and regulations as established by the student body.

Outdoor Traffic Organization.—In order to assist pupils in crossing heavy traffic thoroughfares, many schools have organized outdoor traffic squads that direct vehicular and pedestrian traffic at important pupil crossings near the school. The outdoor traffic organization is usually under the joint direction of the school and the local police department.

The organization consists of pupil captains and as many pupil officers as are needed, depending upon the number of traffic squads required at various crossings, and is sponsored by a man teacher and a local police officer. Pupils who violate traffic regulations are given citations to the court. Drivers who fail to conform to traffic rules are reported to the local police department, which takes charge of such cases. Members of the traffic force are usually sworn into office at the beginning of the term and are honorably dis-



Studying the bases of freedom (Photograph courtesy of public schools San Jose Calif)



A student court in action. (Photograph courtesy of public schools Berkeley Calif)

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Studying the lines of freedom (Photograph courtesy of public schools San Jose Calif)



A student court in action (Photograph courtesy of public schools Berkeley Calif)



Junior traffic officers in control of traffic. (Photograph courtesy of public schools, Berkeley Calif.)

charged at the close of the term by a local police officer. The equipment for pupil officers, including caps, sweaters, insignia, and semaphores, is frequently furnished by the police department. The oath of office and the regulation equipment give authority and lend dignity to the position of these officers. The awards won for distinguished service by an individual or by a group are also conferred by a local police officer, usually at a special assembly for this purpose.

Some schools employ the practice of having the police officer swear into office and discharge all members of the student court and indoor traffic organization. Although the local police are not directly connected with these organizations, such a ceremony, with the police participating, adds considerable prestige to these offices. The cooperation of the school and the police department in the supervision of an activity so vital to the pupils helps them to respect and understand the usefulness of the police. The joint sponsorship of police and school is an excellent illustration of school and community cooperation to promote mutual interests.

When the outdoor traffic organization is well managed, it expedites traffic, reduces hazards, and develops proper traffic habits and respect for traffic regulations. Furthermore, it provides laboratory experiences in personal and civic responsibility and in safety education.

Outdoor traffic organizations increase traffic hazards to pupils in the organization. Legally, public schools are responsible for accidents in the event of negligence while the pupils are at school. For this reason many schools consider that the increased liability involved outweighs the possible educational outcomes of the outdoor traffic organizations. Schools using an outdoor traffic organization should require all members to obtain written permission from their parents.

Pupil participation in school administration is an essential component of the total educational program in the junior high school. When properly evolved and directed it develops in pupils by means of the laboratory method not only understanding and appreciation of good governmental procedures in society but also courtesy, school morale, and respect for the rights of others and for delegated authority.

COMMUNITY PARTICIPATION IN SCHOOL ADMINISTRATION

The school as one of the five basic institutions of society is discussed in Chap. IV. This same chapter also emphasizes the

importance of an understanding of the functional interrelationships of these institutions. For the school to fulfill its responsibility as a social institution, it is essential to have wide community participation in its administration. In addition to the methods of interpreting the school that are discussed in Chap. XVI, community participation in administrative procedures also serves to interpret the schools to the public. The extent and the method of this participation should be evolved in conformity with the individual school and with the particular institutional agencies in the community.

As an official agency of the state, the school is safeguarded and regulated by many legal provisions. Included among these are laws establishing the authority of local governing bodies, such as the board of education, and laws regulating the delegation of administrative authority over schools, such as those relating to superintendents and principals. These are legal provisions enabling the community to participate in the administration of the school.

The most effective community participation in school administration should mean much more than the fulfillment of legal provisions that establish official school governmental bodies and that provide for the delegation of authority to individuals. It should mean that laymen and agencies actively assist in the actual administration of the school. In addition to the home and the church, agencies that may extralegally participate in the administration of the school include character building, health, relief, and recreational agencies, public libraries, motion picture theaters, police, juvenile courts, Congress of Parents and Teachers, Dads' Clubs, coordinating councils, and other civic, labor, and fraternal organizations.¹ Not only do these agencies represent aspects of community life but their functional organization enables them to assist the school in achieving its objectives. This assistance will be most effectively obtained if the lay individuals and representative agencies have some degree of participation in the management of the school. In the administration of the total school program, the counsel and assistance of these individuals and agencies not only should be welcomed but should be sought.

In the following paragraphs, certain illustrations of community participation in the administration of the school are pointed out for parent-teacher organizations, character building, recreational, relief, health agencies, and service clubs. It should be noted that

¹ COLBY, MERLE, *Handbook for Youth*, pp. 291ff, Duell, Sloan & Pearce, Inc., New York, 1940.

many of these agencies participate cooperatively in the administration of the school and that the illustrations and methods suggested are only a few of the possible ways in which the community may cooperate with the school.

In general, the support of community agencies in the operation of the school should be accomplished through specific committees that include representatives of interested organizations. Examples of such representation were suggested with relation to several general faculty committees shown in Table XXVI. A number of active organizations have education committees that are appointed to cooperate with the schools. For the most part, these committees are unfamiliar with specific education problems, and hence they welcome information and guidance from educational leaders.

Parent-teacher Organizations—Directly or indirectly, parent-teacher organizations have as their sole purpose the promotion of education. By virtue of their interest and function, these organizations should receive special consideration in the formation of administrative committees. Through such committees, parent-teacher organizations may assist in determining the calendar of the school year, the length of the school day and the lunch period, and, in fact, the total program of studies, including the extraclass activities. Parents may well assist in the administration of school dances and other evening programs of the school. If a joint committee of school personnel and community leaders build the calendar of evening programs for the school, a better articulation may be achieved between these performances and other community events. Frequently parent-teacher organizations have funds available for aiding needy pupils or for financing school projects such as the purchase of hand uniforms, costumes, or school library equipment. Such funds may be used to the best advantage when these groups are adequately represented in the administration of specific projects, and, in addition, such representation definitely increases the interest of the organization in the school.

Character-building Agencies—Developing good citizens of sound character is one of the most important responsibilities of the entire community. The best cooperative efforts of the home, the school, the church, and other character building agencies, such as the Junior Hi Y, the girl reserves, the boy scouts, the girl scouts, the camp fire girls, the police department and the juvenile court, are necessary for the fulfillment of this responsibility. It is pointed out in Chap. V that the junior-high-school age is an impor-

tant period for the development of character. The junior high school may best achieve its character-development objectives by obtaining the assistance of all character-building agencies in the community. The school may secure the professional services of some of these agencies to organize groups of pupils as a part of the extraclass-activities program and to train adult leadership for these groups. Such cooperation enables the junior high school to have successful groups of girl reserves, Junior Hi-Y, boy scouts, girl scouts, and camp-fire girls. Through their group-activity programs for young adolescents, such organizations may help build desirable character and prevent much juvenile delinquency in the community. Increasingly, the police department and the juvenile court are calling upon the school for information and assistance in handling juvenile-delinquency problems. Proper cooperation between the school and these agencies should result in more effective remedial procedures for juvenile-delinquency cases.

Recreational Agencies—The importance of an adequate recreational program for youth is being recognized today more than ever before. Excellent community facilities for the recreation of youth may best serve their full purposes when all recreation facilities are operated cooperatively. Many cities have their school playgrounds and their city recreational centers under the supervision of the same individual who unifies the entire recreational program of the community. Where such arrangements do not exist, schools may assist in coordinating the efforts of the community by securing the participation of city recreational personnel in the administration of the school recreational program and by providing directors with information from the cumulative health records of pupils.

The influence of the motion picture upon youth was pointed out in Chap. XI. A large responsibility rests upon the community and the school to see that this influence is in the right direction. The close cooperation between theater managers and principals will do much to improve the quality of pictures shown and the conduct of youth in theaters. In many communities, motion picture councils are instrumental in providing better quality and more appropriate pictures for youth.

Relief and Health Agencies—The need for the improvement of the health of junior high school pupils and the low economic status of many families are discussed elsewhere in this volume. Relief and health agencies may serve youth to the best advantage when efforts of these agencies are unified with the efforts of the personnel

of the junior high school. Counselors should cooperate with these agencies in securing aid and medical attention for needy pupils. All relevant cumulative records of both the school and the agencies should be used in a coordinated effort to solve common problems.

Service Clubs.—Most communities have service clubs with special committees to assist in youth guidance, to provide student aid, and to furnish vocational information to youth. Through such committees, many interested and able members of the community are available for the personal guidance of young boys. These clubs frequently assist needy pupils by furnishing hot lunches, clothing, medical aid, and by financing summer-vacation camps. In addition, much valuable vocational information can be brought to junior-high-school pupils by club members.

The preceding discussion has suggested some commonly used ways in which communities participate extralegally in the administration of the school. As individual and community agencies receive greater recognition by the school, it is likely that together many additional cooperative procedures may be evolved.

SUMMARY

The schools in a democracy should employ democratic procedures with the faculty, the pupils, and the community. The type and degree of participation should be evolved in conformity with the nature of the school and the character of the community. As much democratization should be developed as is consistent with the development of pupils.

The general faculty meeting should form the basis for teacher participation in school administration. Faculty committees should be formed in accordance with local needs. The work of these committees should be coordinated by the administrative council that also relieves regular teachers of administrative details and serves as a check and balance for general committees.

Proper teacher participation should develop loyalty to the school and to the profession, promote understanding of the needs of the school, encourage cooperative endeavor, and stimulate responsibility on the part of the entire faculty.

Pupil participation in school administration provides a laboratory for teaching citizenship in a democracy. In this participation, pupils should be guided and instructed in accordance with the best principles of teaching. The organizational forms and procedures for pupil participation should be adapted to the level of the junior

high school instead of being closely patterned after governmental forms of adult society

Community participation in the administration is essential if the junior high school is to achieve its objectives. Schools should secure the participation of various community agencies and individual leaders in order that the total youth-welfare resources of the community may be directed toward youth betterment and in order that the community may better understand and appreciate its schools. Through proper democratization of administration, schools may adequately train pupils in citizenship and in democracy as well as train them for citizenship and for democracy.

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CHAPTER XV

SCHEDULING SCHOOL ACTIVITIES

The total program of the junior high school includes numerous and varied regular class and extraclass activities. Administrative provisions must be made for the assignment of teachers and for adequate time and building-space allotment for these activities. The extent to which the total program meets the needs of its pupils depends to a considerable degree upon how effectively pupils, teachers, and building space are scheduled for the work of the school. The official schedule of school activities is known as the "master schedule." The master schedule shows the time and location of all regular classes, study halls, and extraclass activities of every pupil and teacher for each period in the day.

In the discussion of the principal and his staff (Chap. XIII), it is pointed out that the principal cannot perform personally all the duties for which he is responsible but must delegate many of them to his associates. The successful principal, however, must realize that the making of the master schedule is a responsibility to which he must devote a great amount of his thought and time.

The master schedule must be constructed so as to make the optimal use of the available personnel and plant facilities in providing instructional activities and services for pupils. A poorly constructed master schedule results in lack of organization and causes confusion of both pupils and faculty, not only during the first few weeks of the term but throughout the entire semester, whereas an efficiently constructed schedule contributes to the orderly operation of the school and to the achievement of desired objectives. An effective schedule is so vital to the successful administration of the school that it is imperative for principals to use the best current practices, theories, and techniques of schedule making.

Although most regular class teachers will participate very little in the actual construction of the master schedule, nevertheless an understanding of the procedures involved, including the many important policy decisions and compromises, will give the teacher

a greater appreciation of the difficulties of building an effective schedule and thus a better understanding of his relationship with the entire school, as well as a realization of the reasons why it is not always possible to arrange the schedule to meet all the preferences of all teachers

POLICIES INFLUENCING SCHEDULE MAKING

Schedule making is influenced by many specific policies that should be established before actual construction of the schedule begins. The policy of the school must be established upon many educational problems, such as (1) pupil teacher ratio, (2) maximum and minimum size of classes, (3) teaching load, (4) teaching combinations, (5) pupil load, (6) length and number of class periods and the use of double periods, (7) length of day, class intermissions, and length and number of lunch periods, (8) the homeroom, (9) extraclass activities, (10) courses offered, grade level, and status, and (11) grouping of pupils.

The extent to which the principal and his staff, in cooperation with the immediate school community, may determine the policy on the foregoing problems varies greatly in different school systems. Frequently many of the policies are predetermined or partially predetermined for the local school by the state code, rules and recommendations of the state department of education, rules and recommendations of accrediting agencies, such as universities and the North Central Association of Colleges and Secondary Schools, rules of the local board of education, and rules of the superintendent of schools.

The local school personnel must be well informed on the foregoing laws, rules, and recommendations, and the school must evolve its specific policies in accordance with them. In the establishment of specific policies, the principal and his associates should be guided by many factors that are characteristic of the local community. Among these should be noted the educational needs, interests, and preferences of the pupils, the personality, special abilities, and preparation of the faculty, plant facilities, economic status of the immediate local school community and the ability and willingness of the district to support its schools, distances pupils must travel to school and the mode of transportation, type of community, urban or rural. All these policies should be decided after a scientific evaluation of current practices, expert opinions, and experimental evidence.

In the following discussion of specific policies, each problem is presented separately for convenience. It should be realized, however, that some policies are predetermined to a greater degree than others and that more consideration must be given to certain factors than to others.

Pupil-teacher Ratio—The term "pupil-teacher ratio" means the average number of pupils per teacher in the entire school. The pupil teacher ratio is obtained by dividing the total enrollment by the total number of teachers. There is some variation in its use, however, since in some schools only the actual number of class teachers are counted, whereas in others all the certificated staff including the librarian, counselors, and principal, are counted as teachers. Usually the pupil teacher ratio is established by the board of education or the superintendent of schools, because it directly affects the school budget by determining the number of teachers to be employed. The pupil teacher ratio varies greatly throughout the country, ranging from 18 in some localities to more than 30 in others. The most common ratio practice falls within a range of from 25 to 30. Variations in pupil teacher ratio are caused by differences in the philosophy of the schools, by differences in ability and willingness of the districts to support their schools, and by differences in the sizes of schools. The maintenance of a high pupil teacher ratio will result in large classes or will reduce the amount of teacher time that can be assigned to duties other than class instruction.

Maximum and Minimum Size of Classes—Although the pupil-teacher ratio may be fixed at 25, not all classes will have exactly 25 pupils. Many individual classes must have enrollments considerably above the pupil teacher ratio to compensate for the assignment of teachers to duties other than teaching, such as counseling library, or attendance work. Furthermore, there must be a number of large classes to balance the small classes that exist inevitably in all schools. Thus a class of 12 in French II may be balanced by a class of 40 in English I. The policy of the school as to the minimum size of classes will frequently raise the question of the elimination of classes or even of subject offerings. In such cases, the needs of pupils in relationship to the number of teachers available should be the determining factor. Sometimes pupils may be scheduled in other classes, and sometimes classes are organized with an enrollment below the established minimum.

Boards of education frequently establish the maximum and minimum size of classes as well as the pupil-teacher ratio. However, many decisions relating to class size will be left to the judgment of the principal and his assistants. These should be considered policies supplementing those predetermined by the board of education. These decisions should always be made in the light of the educational needs and preferences of the pupils, the funds available, and the best educational practices.

The Teaching Load.—The size of the teaching load is a problem that affects the school budget and is frequently determined by the board of education and the superintendent. The term "teaching load" means the amount of work done by the teacher and is measured by (1) the number of classes he teaches and the number of supplementary assignments, and (2) the number of pupil contacts he makes in all these assignments. The number of teaching periods in the day that is recommended by the North Central Association of Colleges and Secondary Schools¹ is 5, with a maximum number of pupil teaching contacts of 150. In addition to these 5 classes, the teacher usually has other assignments, such as study hall, homeroom, and an extraclass activity. The teaching load, like the pupil-teacher ratio, varies greatly in different schools. Small schools usually find it necessary to increase the number of teaching periods and reduce the number of pupil contacts. Furthermore, many school systems, because of their inability or unwillingness to support the schools or because of their philosophy on this problem, maintain a much higher teaching load than the one mentioned above. Thus teachers frequently teach 6 classes, with as high as 240 pupil contacts daily in addition to other assignments.

Teaching Combinations.—The principal may reduce the teaching load of the teacher by considering carefully the preparations required for the various classes assigned. For instance, the teacher who has one low-ninth algebra class and one low seventh, one high-seventh, and two low-eighth arithmetic classes has a heavier teaching load than the one who has three low-ninth algebra classes and two low-seventh arithmetic classes, even though both teachers have five classes and the same number of pupil-teaching contacts. However, the principal may assign seventh grade teachers to two or three subjects to facilitate a fusion of subject materials and to

¹ ROSENLOF, G. W., "Proceedings of the Commission of Secondary Schools," *The North Central Association Quarterly*, Vol. XI, No. 1, pp. 90-91, July, 1936.

achieve a more gradual transition from the undepartmentalized elementary school to the departmentalized senior high school

Pupil Load—The pupil load is the amount of work the pupil carries and is measured by the number of class periods per week. This pupil load has been fairly well standardized in the ninth grade at four subjects plus physical education, or a total of 25 class periods per week, in addition to from 1 to 3 periods per week in extraclass activities. However, this load may be increased when the pupil's schedule includes subjects requiring little outside preparation or when the pupil has a high scholastic standing. In the seventh and eighth grades the pupil load has not been so well standardized and is usually determined by the local school system or by the local school. In schools organized on a 45-minute-period basis, with 40 periods per week, the pupil is usually assigned to 30 or 32 periods of regular classwork, with from 8 to 10 periods scheduled for study and extraclass activities.

Length and Number of Class Periods, and Use of Double Periods—The length of class periods in the junior high school varies greatly in different school systems. It ranges from a generally accepted minimum net period of 40 minutes, as set by various state departments of education and other accrediting agencies, to a maximum net period of 55 minutes. The most common long period is the period of 55 minutes. It has long been the practice in many schools that employ the short period of 45 minutes to schedule double periods for such activities as household and industrial arts. The recent movement toward the fusion of courses has resulted in an increase in the number of double periods needed. In the use of the double period, the basic length of period remains the same and is usually from 40 to 45 minutes.

The proponents of the long period claim that it provides better facilities for supervised study and better opportunities for socialized-project and activity methods of teaching. They contend further that the short period invites the traditional recitation or lecture type of teaching and that it requires more home study on the part of the pupil.

Those who favor the short period point out that it provides a sounder psychological basis for learning by encouraging greater concentration and by stimulating greater interest. Furthermore, the use of short periods creates more periods in the day and thus facilitates schedule building by offering a wider variety of activities, with less likelihood of conflict. The proponents of the short period

further point out that it readily permits the use of the double period, which is desirable for the industrial and household arts and for fusion courses. Thus it may be seen that the short period lends flexibility to the building of the master schedule.

Length of Day, Class Intermissions, and Length and Number of Lunch Periods.—The length of the periods, together with the number of periods, directly affects the length of the school day. The length of the school day must be considered in relation to the character, customs, and traditions of the community. Thus the distances pupils travel to and from school frequently are important factors in determining the school day. The school day can well be longer in a densely populated urban school community, where frequently both parents work away from home and where the pupils must travel only a short distance, than it can be in a rural community, where pupils are transported in buses serving long routes and where the pupils are needed at home to do chores in the early morning and late afternoon.

With the growing emphasis upon socialized pupil activities in the classroom, with the inclusion of a comprehensive physical and health-education program, with the library offering manifold opportunities for leisure reading, and with the recognition of the importance of extraclass activities as a scheduled part of the school day rather than as an appendage to it, there is a need to lengthen the regular school day. The school day in most junior high schools is approximately $6\frac{3}{4}$ hours, lunch period and intermission between classes included. Johnson found that in 40 junior high schools the average school day, exclusive of lunch hour, was as follows.¹

	Minutes
Length of day	357 2
Time in classroom	272 7
Extraclass activities	30 0
Intermission between periods	19 5
Study outside class	35 0

It is apparent that the length of the school day is further affected by the intermission between classes and the length of lunch periods. Determining the length of the intermission between classes involves a consideration of the floor plan and size of the school plant and the

¹ Adapted from JOHNSON, B. LAMAR, "Registration and Schedule Making," Part II of LOOMIS, A. K., LIDE, EDWIN S., and JOHNSON, B. LAMAR, "The Program of Studies," *Monograph*, 1932, No 19, *Bulletin* 17, U S Office of Education.

enrollment of the school. In large schools and in schools whose plants are scattered over a large area, longer intermissions are needed than in small schools or in schools having compact plants. Although the length of the intermission between classes varies from 1 to 7 minutes, it is most commonly fixed at from 3 to 5 minutes.

The length and number of lunch periods are contingent upon the customs and character of the community, the size of the school, the capacity of the cafeteria, and the facilities for recreational activities during the lunch hour. In small schools, all pupils can usually be served in the cafeteria during one lunch period, and adequate facilities are frequently available for recreation during a

TABLE XXVII—SCHEDULE PLANS FOR STAGGERED DOUBLE AND TRIPLE LUNCH PERIODS

Plan	Groups	Activity	Time, minutes	Activity	Time, minutes	Activity	Time, minutes
I	A	Homeroom	20	Lunch	35		
	B	Lunch	35	Homeroom	20		
II	A	Class	45	Lunch	35		
	B	Lunch	35	Class	45		
III	A	Class	45	Lunch	30	Class	45
	B	Lunch	30	Class	45	Class	45
	C	Class	45	Class	45	Lunch	30

relatively long lunch period. There is a desirable trend toward the 30- or 40-minute lunch period, with additional periods as needed in larger schools. The desires of the community should be given serious consideration in determining the length of the lunch hour. Any significant changes in the length of the lunch hour should be adequately interpreted to the community. The practice of providing two or more lunch periods enables the school to use its cafeteria facilities to better advantage, and it avoids the congestion of large groups of children on the playground at the same time. This practice necessitates the scheduling of one group of pupils to classes while the other group is at lunch. The lunch period need not be of the same length as regular periods. Various plans are used for scheduling more than one lunch period. Three such plans are shown in Table XXVII.

In schools in which the plant is inadequate to care for the number of pupils enrolled under regular scheduling procedures, various devices have been used to lengthen the school day and thus to increase the efficiency of the school plant. Foremost among these devices is the staggered schedule that divides the school into groups, each group having a separate school day. For example, group *A* begins its school day at 8 A. M., lunches at 11 15 A. M., and closes at 3 P. M.; group *B* begins at 8 45 A. M., lunches at 12 M., and closes at 3 45 P. M. If the congestion of the building demands it, even a third group may be provided for. Although this type of schedule does increase the capacity of the school plant appreciably, it has serious disadvantages. It tends to destroy school unity, weakens school spirit, increases problems of "cutting" and tardiness, and creates unavoidable disturbances as one group is entering or leaving the building while the other group is in class. Likewise, it increases the difficulty of holding meetings of the entire faculty or even of representative committees of the faculty. Thus, under the staggered schedule, none of the faculty meetings can be held before school or during the lunch hour, and when held after school, these meetings place an additional burden upon teachers who are assigned to an earlier pupil section.

The Homeroom.—Among administrators, the homeroom as a unit of organization, is another controversial problem about which the school must establish a policy. Under the homeroom plan, the entire student body is divided into groups of convenient class size, which are assigned to a homeroom teacher who assists in the guidance of the group. These homeroom groups also provide a basis for keeping official attendance and scholastic records, as well as furnishing a basis for student-body organizations. The homeroom period further provides a time for reading administrative bulletins to pupils and for pupil discussions of questions relative to pupil participation in school affairs.

There is no well established practice in the length, frequency, or time of day for the homeroom period. This period may be from 5 to 45 minutes in length, from 1 to 5 days a week, and it may be scheduled for any time in the day. The particular functions that are assigned to a homeroom help determine these matters. Many schools, however, have made it a practice to schedule the homeroom the first period in the morning or the first period after lunch for the convenience of taking attendance and reading administrative bulletins, when this is the administrative policy of taking attend-

ance Many schools also have followed the practice of scheduling extraclass activities at these times, a practice that necessitates a period of regular length. The more recent tendency in this regard, however, is to schedule a separate period for extraclass activities. With the increasing emphasis upon the employment of specially trained counselors who are responsible for a large portion of the guidance work, together with the establishment of a special attendance department, some schools are abandoning the homeroom organization and adding 5 minutes to a specific period in the day for the reading of administrative bulletins. On the other hand, schools that are developing the new social living courses are continuing the homeroom organizations, but without a special homeroom period. The work of the homeroom is then carried on in the social living class.

Extraclass Activities—The effectiveness of extraclass activities, discussed in Chap. IX, bears a direct relation to schedule making. Until quite recently, extraclass activities were not scheduled as a part of the total program of school activities. They were frequently held before or after school or at any period in the day, with too little regard for interruptions to regular classes. With a wider appreciation of the educational importance of these activities, they are now being accorded a regular place in the schedule. In many junior high schools, a period of regular length is reserved in the master schedule for all extraclass activities, including assemblies. Cross-sectional classes such as band, orchestra, and choruses are frequently scheduled during this period to avoid conflict in scheduling and to permit pupils in all grade levels of the school to participate in the same activity. Furthermore, sponsoring extraclass activities should be a scheduled portion of the teaching load. Because of the educational value to pupils, the time required of teachers and the use made of building space, it is highly desirable to schedule all club and other extraclass activities of the school.

Courses Offered, Grade Level, and Status—Scheduling the instructional program is, of course, the heart of schedule making. Many policies affecting the program of studies must be determined even before the schedule may be projected. Thus decisions must be made with reference to the courses that are to be offered, their grade and group level, and the status as required or elective courses. As is true in many other matters of policy in schedule making, policies with regard to the total program of studies may be partially predetermined by the state school code, the accrediting agencies,

the local board of education, and the superintendent. Furthermore, in many systems, the courses offered, the grade level at which each course is offered, and the status of the course as a required or elective subject will be decided by the cooperative planning of the entire school system (Chap. VII). However, in some junior high schools, the principal and his staff will have much freedom in determining the policy with regard to courses offered and their grade level and status, especially for courses in the seventh and eighth grades, where accrediting agencies are not so vitally concerned.

The recent reorganization of secondary education, with its emphasis upon the pupil instead of upon the subject, brings this problem constantly before the principal and his faculty. It is apparent that the schedule maker must have clearly in mind the school policy with regard to the total program of studies and construct the schedule in conformity with it. A poorly built schedule frequently limits the courses that a pupil may select. For example, if the schedule is built so that elective courses conflict with required courses, then the school really has not given the pupils an opportunity to take the elective courses.

Grouping of Pupils—There is general agreement among junior-high-school administrators that some form of grouping of pupils other than by grades or half grades is necessary, but the practices with regard to the extent and kind of grouping are far from uniform. The extent and kind of grouping of pupils greatly affect schedule making, and determining the policy on grouping is usually a responsibility of the principal and faculty.

The principles and the criteria for the classification of pupils that are proposed in the present volume are presented in Chap. V. Obviously the policies that are adopted and the practices that are followed must be incorporated into the master schedule.

One of the most common forms of grouping is the ability grouping for regular class instruction, the purpose of which is to adapt the work of the class to the needs and abilities of the pupils. Frequently, in the lower grades of the junior high school, this same grouping is used for the homeroom. Warner,¹ in a study of the large junior high school, found ability grouping quite general for regular classes and for homerooms. He also found that the majority

¹ WARNER, H. E., *Schedule Making in the Junior High School*. Ph. D. thesis, George Washington University, Washington, D. C., 1931. Cited by LANGFITT, R. EMERSON, *The Daily Schedule and High School Organization*, p. 255. The Macmillan Company, New York, 1938.

of principals in these junior high schools made the superior ability groups larger and the lower ability groups smaller than the average-sized classes

Some form of ability grouping can be made without serious complications in schedule making in the large junior high schools, especially in the seventh grade, but the complications increase in difficulty and number as the elective courses increase in the eighth and ninth grades. Sometimes, in the upper grades, both regular classes and homerooms are grouped according to the curriculum that pupils select. Principals find grouping difficult in small junior high schools and must realize that a compromise is necessary between the extent and kind of groupings and the scope and enrichment of the program of studies.

It is a common practice to segregate the sexes for the purpose of instruction in physical education. Some attempts are being made to group pupils in physical education on the basis of their size and degree of maturity, but when this practice is carried to an extreme, it results in undesirable compromises and sacrifices in the pupil's program of studies.

Summary of Policies Influencing Schedule Making—Many policies influencing schedule making are predetermined or partially predetermined by laws, rules, or recommendations of accrediting agencies, state school codes, the state departments of education, local boards of education, and superintendents. There is a great variation in the responsibility that the principal and his faculty have in determining most of these policies. Principals in some localities have almost complete freedom with reference to certain policies, whereas in other localities other principals have almost no freedom with regard to the same policies.

The principal must formulate scheduling policies for the school that will best meet the interests and needs of the pupils, but he must make his policies in conformity with predetermined laws, rules, and regulations and in consideration of the various factors affecting policies. Furthermore, the principal should formulate his policies in cooperation with his faculty and with the community.

It should be apparent that the principal and faculty are not called upon to determine all these scheduling policies every semester but that they should continually reconsider and reevaluate them as conditions change as new rules and regulations become effective, and as practices, expert opinion, and experimentation point to new procedures. The changes wrought by certain factors, such as an



Counselor and pupil making out pupil's subject list (Photograph courtesy of public schools, Richmond (alt))

economic depression, a rapid increase in school enrollment, or an addition to the school plant, obviously call for a reconsideration of these policies

DATA NECESSARY FOR SCHEDULE MAKING

After school policies on scheduling problems have been determined, the person making the schedule is ready to consider the specific school data that are needed for the master schedule. These data include all the individual pupil subject lists, teacher qualifications and preferences, and school plant facilities.

Pupil Data.—The detailed information needed about pupils includes the accurate total enrollment and the list of the regular subjects and extraclass activities for which each pupil should be scheduled. The time and method of collecting these data differ greatly in practice. Ordinarily, about 8 or 10 weeks before the close of the term, the guidance personnel should begin to collect these data. The guidance personnel must interview every pupil enrolled in the school and every pupil expecting to enter from contributing schools. These conferences are for the purpose of developing a tentative individual list of subjects and activities for each pupil for the ensuing semester. The list of subjects should have the approval of the parent, either in conference or by signature. In small schools it may be necessary for the principal to do this work himself, but in a large school he usually delegates it to counselors, homeroom teachers, or other guidance personnel, depending upon the organization of the guidance program.

Teacher Data.—The principal should have in his confidential file accurate, up-to-date, and complete data on the certification preparation, experience, and special abilities of each teacher. Either through a written statement or through meetings with the faculty, he should secure from each teacher any recommendations that the teacher wishes to submit on the making of the schedule. He should also secure each teacher's preferences on subjects, extra-class activities, homeroom assignments and lunch period. It must be clear that some of these recommendations cannot be followed and that not all teacher preferences can be granted, but the principal should give careful consideration to them and in the light of his knowledge of the individual teacher's capabilities and interests, build the master schedule so as to place each teacher where he will do the best work. Just as each pupil is entitled to know why he cannot take a subject listed in his curriculum, so the teacher is

entitled to an explanation if his teaching program is not satisfactory. It was pointed out earlier in this section that the principal should secure the help and cooperation of the faculty in determining policies affecting schedule making. Likewise, he should also keep his faculty informed with reference to the techniques of schedule making, as well as the necessary compromises and balances that are involved. Such means as these will help him to command the respect of his faculty and to maintain harmony in the school.

School-plant Data—In order that the schedule may be built so as to utilize the school plant facilities for the greatest benefit to pupils, a floor plan must be made showing the number, size, and type of each room and the number of pupil stations in each room. With these data at hand, the schedule should be built in the light of the best practices of school plant utilization.

TECHNIQUES IN SCHEDULE MAKING

The actual construction of the master schedule involves a number of techniques and demands much ingenuity. Rather than rely on the trial and-error methods, the principal should be familiar with established techniques and successful practices and adopt a systematic plan of procedure that is most suitable to his school.

Master Work Sheet—The first step in the construction of the schedule is a master work sheet. For this purpose a large sheet of heavy paper or cardboard may be used. The master work sheet should be ruled in columns wide enough to write a teacher's name. There should be one column for each member of the faculty and one extra column. The master work sheet should then be ruled into rows about 1 inch wide, so that there is one more row than there are periods in the day. In the top row of the rectangles thus formed, beginning in the second column, the names of the teachers should be listed alphabetically or by departments. In the first column, beginning in the second row, the periods of the day should be listed in consecutive order, showing the exact time of the beginning and ending of the period. When the schedule is completed on the work sheet, each column will contain a teacher's total assignment: his regular classes, study hall, homeroom, extra-class activity, lunch, and free period. Each row will contain all the classes or activities that are scheduled for that period. Each rectangle should contain the subject, section, room number, enrollment, and the day in the week that the class meets, if it meets less than five times a week.

In large junior high schools, the master work sheet will be quite unwieldy because of its length. Such an inconvenience may be avoided by cutting the work sheet into two parts and pasting the second half of the faculty list below the first half.

Some schedule makers may wish to reverse the entire process, placing the teachers' names in the first column and the number of periods and time in the top row. Some also may prefer to use different materials for work sheets, such as a pin board or a portable blackboard. When a pin board is used, data should be written on slips of paper and thumbtacked in the desired rectangles. These can readily be moved from one place to another to alter the temporary schedule. Another procedure that has been found satisfactory is that of sewing rectangular pockets on a large piece of cloth. The assignment data are then put on small rectangular cards and placed in appropriate pockets. These cards can readily be moved from one pocket to another. Frequent changes are needed in the work sheet throughout the process of making the schedule. Therefore the schedule maker who uses the large sheet of heavy paper will find it advantageous to rule his paper in ink and write his information into the rectangles with pencil so that information may be readily erased.

Assignment of Homerooms—When the homeroom organization is used, the principal must divide his pupils into homeroom groups upon whatever basis has been previously decided. Since the number of homeroom groups is larger than the pupil teacher ratio, it is evident that not all teachers in the school will have homeroom assignments. Furthermore, there are teachers such as counselors, the cafeteria manager, and the attendance officer whose special assignments may conflict with homeroom assignments. Frequently, moreover, the teaching load may be so heavy that certain teachers should be excused from homeroom duties. The number and type of these homeroom assignments will vary with the organization of the school. In schools that allocate homeroom work to social living classes, the principal may wish to schedule more than one homeroom group to the same teachers. When social living classes are used for the homeroom guidance activities, a slightly different situation prevails. Social studies or English teachers then have two or three double-period social living classes. In such cases the principal may schedule a homeroom group for each social living class.

The assignments of homeroom groups together with the number of pupils in each group, must now be placed in the rectangles in the

top row of the work sheet under the name of the teacher. There should be prepared in triplicate alphabetical lists separating the boys and the girls by homeroom groups. These lists will be kept for constant reference throughout the construction of the schedule, after which the principal retains one, the respective counselor receives one, and the other is placed in the appropriate homeroom teacher's box as part of his necessary data for the opening day of school.

Scheduling Classes.—These pupil lists must then be tabulated according to grade and according to subject classes, and in cases where the enrollment warrants it, the subject classes must be divided into sections. The judgment of the principal is needed at this point, because when the master tabulation sheet shows too small an enrollment in relation to the pupil-teacher ratio and the minimum sized class policy of the school, he must decide whether or not to eliminate the course. When courses are eliminated, a second conference is needed with each pupil to tell him why that particular course cannot be given and to advise him in the selection of another course. Pupils should be made to feel that the school is endeavoring to meet their preferences and needs as fully as possible.

The schedule maker is now ready to place into the rectangles of the work sheet the assignments for each group of pupils and for each teacher, for each period in the day. He should reserve one period of the day for extraclass activities, including assemblies, and cross-sectional classes such as hand, orchestra, and glee clubs. A successful procedure has been to reserve the last period in the day for these activities to permit them to continue beyond the close of the day when contingencies arise. Furthermore, if this type of activity is scheduled at any other time except the first or last periods, it interferes greatly with the use of double-period classes in the schedule. The first period is unsatisfactory for assemblies, because a few teachers and many pupils frequently need one or two periods immediately preceding an assembly to prepare for it. After a period has been set aside for extraclass activities, they should be located on the schedule and teachers assigned to them. In continuing with the schedule, the principal must consider the various administrative practices and procedures that are in use in the school in relation to scheduling techniques. In this, the schedule of the present semester serves as a useful guide, especially when there are few changes in the enrollment, in the faculty, or in the program of studies. Furthermore, it will be found that certain assignments take priority

over others. Thus, when the foods teacher is the cafeteria manager, she must be assigned to the cafeteria for the hours during which she is most needed there, before her foods classes are scheduled. Thus, too, when a teacher is assigned to serve as head of the attendance office, he should be assigned first to this department for the periods needed.

Scheduling electives requires careful consideration. In most junior high schools the number of electives increases in the eighth and ninth grades. It is therefore wise to begin scheduling with the ninth-grade required courses. When there is more than one section of the same class, these sections should be scheduled at different periods to allow more freedom for scheduling other subjects. Insofar as possible, electives should not conflict with required courses or with other electives.

Another complication of schedule making grows out of the need for segregating boys and girls for physical education and for household arts. Frequently it is desirable to assign girls to household arts and boys of the same section to industrial arts or to physical education during the same period. Too commonly, scheduling practices have given priority to all subject classes, leaving physical education to the last and scheduling physical education during remaining vacant periods. Such a practice usually results in a highly disorganized, ineffectual physical-education program. Not infrequently there may be found in the same physical-education class a group of low-seventh-grade, high-eighth-grade, and high-ninth-grade pupils on one day, and on the next day the same low-seventh group will be scheduled with pupils from the low-eighth and the low-ninth grades. Obviously such lack of planning is not conducive to the development of a sound health and physical-education program. This weakness may be obviated by allocating, early in the process of constructing the schedule, certain periods of the day for physical education for each grade or half grade. Further homogeneous groupings of physical-education classes may be made, but it must be remembered that, as has already been suggested, such further groupings complicate schedule making, especially in average-sized and smaller schools.

Block System.—The block system is a commonly used technique in schedule making. This is a device whereby pupils are scheduled by groups. It is especially effective in the seventh and eighth grades, where there are fewer electives and where pupils are frequently scheduled by homerooms or other sections. For instance,

when there are five sections in the low seventh grade and when each section is to be assigned the same program of studies with the exception of extraclass activities, an entire section may be blocked at one time. This block method can also be applied in various degrees throughout the entire schedule. Thus, when there are enough pupils enrolled for English I, social studies I, and algebra I, to make three sections, one entire section at a time may be blocked into the schedule, with the following results

Section	Periods								
	1	2	3	4	5	6	7	8	9
I				Alg I	Lunch		Eng. I	Soc studies I	
II				Alg. I	Lunch	Eng. I	Soc studies I		
III				Eng I	Soc studies I	Lunch	Alg I		

In scheduling these blocks, it is wise to keep as many periods as possible free for elective classes that may include pupils from all three sections.

An inspection of the preceding block schedule will show that for each section, the English and social-studies classes have been scheduled in consecutive periods so as to permit a fused double-period course in social living, when these are desired as substitutes for the older courses. It should be noted further that periods 1 and 2 are now free for double-period classes, such as industrial or household arts, and that period 3 is open for physical education for all sections. It may be desired to schedule all three sections of social living I in the same period to leave more periods free for electives and to permit ability grouping within the social living classes but not in the other classes of these blocks.

A further step in the process of scheduling is to schedule pupils in study halls for every period during which they have no other assignments. It is important to keep in mind the possible relation of study halls to other assignments so that study halls are distributed evenly throughout the day. Insofar as possible, pupils should not be scheduled for two consecutive study periods. Stu

dents who are interested in the block method and its further applications are referred to the works of Langfitt,¹ Puckett,² and Warner.³

Room Work Sheet.—After the master-schedule work sheet has been prepared, a room work sheet must be made. This sheet is like the master-schedule work sheet except that the columns can be slightly narrower and in the place of the teachers' names across the top, there will be room numbers and the number of pupil stations in each room. In the rectangles on this sheet will be placed the subject, the grade, the section, and the teacher's name. As assignments are made on the master work sheet, they may also be written on the room work sheet. An inspection of the room work sheet thus will show instantly the rooms that are available, as well as their pupil capacity. In this way, the room work sheet facilitates the assignment of rooms and serves as a check on the master work sheet. This room work sheet should be filed for reference in order that it may be used throughout the semester to locate vacant rooms as these are needed for temporary or emergency assignments.

Care and judgment should be used in assigning rooms to teachers in order to reduce the number of room changes that a teacher must make during the day, as well as the travel distances between assignments. Although the schedule should provide for the best utilization of the school plant, there is a human element that must be considered in the total educational situation. In modern schools teachers are heavily scheduled and as a consequence are under a fatiguing nervous strain. When the entire plant is scheduled for greatest theoretical efficiency and use, no consideration is given to conserving the energy or promoting the efficiency of teachers. Too frequently this practice develops increased emotional strain and fatigue, with a corresponding loss of teaching efficiency. It should be remembered that schedule making is a procedure of scheduling effectively not only school plant facilities but pupils and teachers as well.

Final Checks—Much of the detailed work of schedule construction may be delegated to able counselors or other administrative

¹ LANGFITT, R. EMERSON, *The Daily Schedule and High School Organization*, The Macmillan Company, New York, 1933.

² PUCKETT, ROSWELL C., "The Difficulties of Making a High School Schedule of Recitations," *Doctoral Theses in Education II*, University of Iowa Studies in Education, Vol. IX, Iowa City, 1934.

³ WARNER, *op. cit.*

assistants, provided that the principal directs and checks the procedure. Before the schedule is completed, the principal should see that the most important factors have proper relation to the total problem. Thus, for example, he should make certain (1) that there is a minimum of conflict with schedule policies, (2) that all assignments for all pupils are listed on the master schedule by periods, days, and teacher section or grades, (3) that every extraclass activity has a period placement, (4) that all assignments of teachers appear on the schedule, (5) that teacher assignments are evenly distributed throughout the week, (6) that there is an optimal equalization of teaching loads, and (7) that there has been a reasonably efficient utilization of the school plant.

Under various plans of homogeneous groupings, the principal may wish to see that these homogeneous groups are evenly distributed among teachers so that no teacher is overloaded with any particular ability group. The assignment of study halls provides one opportunity to equalize teacher loads. It will frequently be impossible to equalize the teaching load each semester, but the principal may see that inequalities in one semester are compensated over a series of semesters. Furthermore, there are especially desirable assignments in every school as well as less desirable ones, and it is the duty of the principal to see that the distribution of both is fairly made over a period of time.

Pupils' Schedules, Teachers' Class Lists, and Study-hall Lists — After the master schedule has been tentatively completed, there remains the further step of preparing individual pupil schedules, teachers' class lists, and study hall lists. All these may be completed concurrently. A special blank may be used for the pupil schedules. The name of the pupil, the name of the homeroom teacher, the grade, and the section should be written on the top of this blank. The lower part should be divided into columns and rows, with each column representing a period of the day and each row one day of the week. At the top of the class lists and the study-hall lists there should appear the teacher's name, the period, and the room number.

When preliminary preparations have been made, pupil schedules, teachers' class lists, and study hall lists may then be prepared from the assembled individual pupil subject lists in relation to the master schedule. As assignments are entered on pupils' schedules, the names of pupils may be entered on teachers' class lists and study hall lists. When all pupil schedules are completed, they will show the

subject, the study hall, the extraclass activities, and the lunch period, together with the teacher's name and the room number for every period in the week. Each class list and study-hall list will contain the names of all pupils assigned to the teacher for that period. In this procedure, care must be taken to maintain proper size of study halls and classes. Occasionally class enrollments may be too large or too small, in which case a change will need to be made in the distribution of the classes or perhaps in the master schedule itself. When these pupils' schedules have been completed, the teachers' class lists and study-hall lists will likewise have been completed, since they have all been done concurrently. The pupils' schedules should now be classified by homeroom groupings, alphabetized, and placed in the appropriate homeroom teachers' boxes. The teachers' class lists and study hall lists should also be alphabetized and duplicated. One copy of these lists should be placed in the appropriate teacher's box and the other copy given to the appropriate counselor.

Duplicating the Master Schedule—Copies of the master schedule are needed not only by the principal's office but by every member of the faculty. Accordingly, a convenient, economical way of duplicating the master schedule must be used. Some frequently used methods of duplication are mimeographing, printing, blueprinting, black line printing, photostating and hectographing. The method used will depend upon the facilities of the school. A successful and inexpensive practice is to divide the master schedule into sections the size of typing paper and to type stencils of each. After these have been mimeographed, they may be pasted together for large desk or bulletin board use or left separate and placed in book form for teacher use.

PREPARATIONS FOR OPENING DAY

After the master schedule has been built, preparations must be made for the opening day. A school well organized and smoothly operated on the first day of the semester is indicative of future success. It is important, therefore, that correct plans and procedures for the opening day be carefully defined and executed.

Opening-day Procedures—The opening-day procedure should be planned in accordance with the size and organization of the school. Procedures that are successful in some schools will need to be modified for others. One that has proved successful for some schools is as follows:

1 At the opening bell, the pupils assemble in one or more groups, the number of groups depending on the size of the school and the facilities for assemblies. Bulletins posted in prominent places throughout the building and on the grounds, together with pupil monitors stationed in the halls, direct the pupils where to go.

2 The principal extends a greeting and welcome to the incoming low seventh class.

3 Counselors of their respective groups take charge of the assemblies, read the homeroom lists, and send the pupils to their respective homerooms.

4 Pupils new to the school who are not from regular contributing schools and who have not been registered remain with their counselors for registration. When the counselor completes their registration, he sends them to their respective homeroom teachers with copies of their registration cards and pupils' schedules, which serve as an admittance to that homeroom group.

5 Only those pupils whose names appear on the teacher's homeroom lists and those who bring registration cards from their counselors are admitted to the homeroom. All other pupils must be sent to their counselors.

6 With pupils in their respective homerooms each teacher has each pupil in his group make out four additional copies of his daily schedule. The original copy is returned to the counselor, one goes to the principal's office, one to the attendance office, and the pupil and homeroom teacher each retain one. Each pupil also makes out two registration cards: one for the homeroom teacher, the other for the principal's office.

7 The homeroom teacher reads and explains the administrative bulletin to the pupils and discusses with them the schedule for the day. Patiently and painstakingly he answers their questions and repeats the routine procedure for the day.

8 The homeroom teachers of new low seventh pupils take time for a brief orientation talk about the school and give them an orientation booklet, which they will study further in the homeroom or in other classes and which they are requested to take home and discuss with their parents (Chap. V).

This complete registration should not require more than two or three periods, after which the school should begin on the regular schedule and continue throughout the day. The principal, after greeting the new low seventh grade pupils, spends the remainder of the morning greeting other new pupils, conferring with parents,

and supervising the work of the main office and of counselors. He will then have the afternoon free to visit classes or to perform other supervisory and administrative duties

Faculty Meeting and Conferences—By whatever procedure is most suitable to the local situation, the principal should arrange a faculty meeting just prior to the opening of school. At this meeting he should present the plans for the year, announce personnel changes and other changes in the school, and explain the procedure of the opening day. Previous to the opening of school, the principal should hold conferences with all teachers who are new to the school and explain their duties and responsibilities and the general procedures of the school.

Materials for Teachers on Opening Day.—Mention has been made from time to time of materials to be placed in teachers' boxes for the opening day. Much time of the teacher can be saved and much confusion eliminated on the opening day if the principal uses care to see that each teacher has all the materials that are necessary. These usually include

1 Materials for homeroom teachers only

- a The homeroom list of pupils
- b Pupils' blank registration cards
- c Pupils' individual schedules
- d Sufficient number of pupils' blank individual schedule cards to make four copies

2 Materials for all teachers

- a A copy of the master schedule
- b Teachers' regular class lists, extraclass lists, and study hall lists
- c Teachers' class record book
- d Principal's opening-day bulletin to teachers
- e Principal's bulletin to pupils
- f Temporary supplies, such as pencils and scratch pads
- g Requisition forms for regular supplies
- h Requisition forms for textbooks

Opening-day Bulletins—Plans for the opening day should be described explicitly in bulletins, one for teachers and another for pupils. The teachers' bulletin should contain a list of all materials to be found in teachers' boxes, an explanation of the uses of these materials, a description of the routine for ordering books and supplies, and directions for the entire day's procedure.

The pupils' bulletin should contain a greeting to former pupils and a welcome to new ones. This bulletin should also give informa-

tion about changes in the personnel, in the school plant, and in the time schedule, and it should conclude with general directions for the day

When adequate planning and efficient organization have preceded the opening day of school, there is little need for confusion or bewilderment on the part of pupils or teachers. With adequate planning, little time will be wasted on the opening day in changing schedules, balancing classes, and shifting homeroom assignments. Instead, on the first day, the school will be characterized by full-length regular classes and by calmness and routine. Principals who give meticulous care to planning the opening day of school do so because they are appreciative of the value of the pupil's time, the taxpayer's money, and of their own professional prestige.

CLOSING THE SEMESTER

The procedure for closing the semester as well as for the opening day must be efficiently planned. Although there are many books and other materials to be checked in and many records to be completed by the faculty and although there is a tendency among pupils to enter prematurely into the vacation spirit, nevertheless, when the closing of the semester is adequately planned, valuable activities may be carried on through orderly procedures. Serious class activities can and should be carried on until the last day. There are always a desire for and need of many school assemblies and special class activities, such as class parties, near the close of the semester. When these are carefully planned in advance, they build school morale and serve as effective socializing experiences.

About ten days before the close of the semester, the principal should issue a faculty bulletin in which he describes in detail the procedure for closing the semester. Early in the last week, he should issue a faculty, as well as a pupil, closing-day bulletin for the last day. These last two bulletins should include the schedule for the day when the regular daily schedule is not followed.

Many schools have found it advantageous to reserve a large portion of the day for class parties, homeroom sessions, and assemblies. It is frequently necessary to divide the student body into two or three groups for assemblies in order to adapt the assembly activities to the pupils. In these assemblies, honors and awards are bestowed upon meritorious pupils, honorable discharges are issued to pupil officers, and special musical programs are

provided. The last day is also an appropriate time for the senior class-day assembly, with its many interesting activities.

The homeroom sessions on the last day are used for checking in materials, clearing all records, issuing report cards, and holding class parties. This plan concentrates all such activities in the last day and permits regular classwork to continue until that time.

SUMMARY

The extent to which the junior high school achieves its objectives depends to a considerable degree upon how effectively pupils, teachers, and plant space are scheduled. Although the principal may delegate to his associates much of the detail work in making the schedule, it is essential that he direct, supervise, and check the entire procedure. The principal and the faculty determine the general philosophy, the objectives of the school, and specific policies of the school on problems influencing the schedule. Many of these policies may be predetermined or partially predetermined by laws, rules, or regulations of accrediting or governmental agencies. There are many factors that help to determine the policies on problems influencing schedule making.

The master schedule should be made with reference to the best techniques and practices in schedule making so as to utilize the faculty and the plant facilities in meeting the needs of the pupils and the community in the most efficient way.

The procedures for the opening day and for the closing days of the semester should be adequately planned in advance so that effectual educational activities may be provided.

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CHAPTER XVI

INTERPRETING THE SCHOOL TO THE PUBLIC

In an agrarian age, with small schools and sparsely settled communities, local control over the district school had a decidedly different meaning from local control over the large urban school systems of today. Under the older district system of education, local control often meant employing one teacher for a one-room district school under conditions of intimate public familiarity with all that transpired in the school and with fairly active participation in the management of its affairs. Today, however, school districts are a part of state systems of education. Too often local control is interpreted to mean merely the payment of local school taxes and the election of a local board of education with the delegation of administrative authority to appointive professional personnel. To be sure, many citizens take an active interest in school affairs, but in large urban centers the great majority are so occupied with personal affairs that they find little time for concern with affairs of public education. One reason for this condition lies in the fact that school affairs are believed to be administered with sincerity and integrity in the public interest, another reason may be found in the lack of familiarity with technical aspects of modern education. The inevitable consequence of a thoroughgoing delegation of administrative control over education has been the development of a widening gulf between the public understanding of school problems and evolving professionalized educational philosophy and procedures.

THE NEED FOR INTERPRETING THE SCHOOLS

The distinguishing characteristic of a social institution such as the school is that the institution is a noncorporate body of ideals, customs, and practices that exist only in the minds of persons who compose the social group. If the school is to serve as one of our democratic institutions, it is therefore not only impractical but indefensible for educators to conceive educational functions and to formulate educational procedures that are to be imposed upon the general public.

The Need for Interpreting Educational Functions—In general, the American public has an unbounded faith in education as a means of promoting individual welfare and as a means of promoting national strength and solidarity. Nevertheless, wide variations are observable in the character and the adequacy of school programs that are provided by local school districts throughout the nation. These variations are caused in part by custom and tradition, in part by the ability of communities to support education, and in large measure by the public consciousness of the need for providing a socially adequate educational program.

Public consciousness of the need for educational services varies with the acceptance of social responsibility for the correction and prevention of personal maladjustments and social problems, and it varies further with the interpretation of the functions that the school ought to perform in the solution of recognized problems. From these considerations, it follows that the nature, scope, and function of the school that a local public demands and is willing to support is an expression of the delegation of responsibility to the school for the solution of defined problems.

The history of American education is replete with instances of new educational services that were introduced under private or philanthropic auspices for a few individuals and that were found to be so useful and beneficial that they were incorporated into public education for all children. In the current social scene there are numerous social problems for which educators envision effective remedial or preventive educational procedures but which as yet are not generally recognized as being within the province of the school.

Because the major responsibility for planning and implementing an effective educational program has been delegated to professional educators, they must assume a direct and urgent responsibility for interpreting their purposes and means to the public. Although professional educators may assume the leadership in interpreting and clarifying social problems in terms of educational functions, purposes, or objectives, it must be understood that the programs that are projected by educators cannot become truly operative in a democracy until these are widely understood and accepted by the public. Promoting an understanding and acceptance of a feasible statement of purposes and functions of education must therefore be considered the first basic need for interpreting the schools. Coordinate with this need is that of interpreting the means of educa-

tion, which, broadly speaking, may be defined in terms of materials and procedures

The Need for Interpreting the Means of Education—Perhaps the most prominent source of conflict between the lay public and educational personnel is to be found in the field of methodology. Even though there may be agreement upon what the schools of a democracy ought to accomplish, the question of how these functions may best be realized remains confusing to the interested public as well as to teachers themselves.

The force of tradition is strong. On the whole, parents believe that the courses of study, the methods, and the procedures with which they are familiar are the most effective, and hence these are the ones that they most favor for current school use.

For the most part, parents are unfamiliar with comparatively recent scientific educational contributions that have added materially to an understanding of pupils and that have led to a more effective selection, organization, and placement of teaching materials and procedures. Thus, for example, the great majority of parents of the pupils now in junior high school were in school before this newer division of public education became widely popular. Parental knowledge of the junior high school is thus largely restricted to such information as may come to them from pupils, from the direct interpretive activity of the school, and from personal contacts with the school. Furthermore, the underlying principles and the procedures of the junior high school, like those of all public education, are evolving to meet ever-changing conditions and needs. Throughout all modern education, freer and more democratic classroom procedures are replacing the more autocratic methods of a previous generation. Today the center of interest is more largely in the total personal-social situation, as opposed to a previous center of interest in subject matter alone. Similarly, various provisions for individual differences have brought about changes in academic standards for the general pupil population as distinguished from the more rigorous academic standards maintained by the secondary schools of the past. These and various other changes and services that have been introduced into modern education as a means of furthering its newer objectives require interpretation in language that is meaningful to the lay public. This is especially true if the schools secure public support for an expanding program to meet the educational problems that ought to be allocated to the schools of a democracy.

Certain principles or criteria underlying all social interpretation have been formulated by Mochlman as follows

1 Democratic social institutions are merely facilitating means for the achievement of a social purpose and have no fundamental value apart from purpose

2 The educational function is constant, but its institutional organization must be considered as a purely transitory expression of the function

3 Democratic social institutions rest on public confidence which depends ultimately upon the honesty and sincerity of institutional functioning. The democratic public school is limited in its institutional effectiveness and breadth of program by the confidence and understanding of the people and cannot rise far above the popular concept and understanding of function. Informational material must be adjusted to the interest and intelligence of a culturally complex adult audience

4. The public school as an impartial democratic agency operates on the central tendency in public opinion and will always be subject to criticism by reactionary and radical opinion.

5 The theory of democratic institutional authority definitely limits both purpose and method of interpretation and considers the enlargement or contraction of institutional activity to be a function of the people. The interests of all of the people are superior to the interests of the teaching profession

6 The public school acts as an institution for harmonizing cultural differences and must avoid the creation of social conflict. Institutional interpretation must avoid all implications of a propagandistic motif. Institutional interpretation must be based on the larger objectives of public education and be truthful, sincere, and simple

7 The partnership concept of public education in the United States requires the active interest and intelligent participation of parents in the educational program

8 Institutional interpretation is a process of adult education to the purpose, value, conditions, and needs of public education. Interpretative methodology demands the application of the laws of learning to adult education and information that is constant and regular in character

9 The process of social interpretation is cooperative in nature, and its success is contingent on the active and intelligent participation of every institutional agent and can be ultimately effective only to the extent that all participating agents conceive of their functional responsibility for participation in a functional activity.

10 The legal responsibility for determination of interpretative policy and the approval of means for making policy effective is a function of the educational legislative body—the board of education

11 The use of children in the interpretative program is limited to the development of understanding and appreciation of the purpose and value of all social institutions.

12 The teaching profession as an interest group may make normal attempts, in accord with sound democratic practice, beyond institutional limits to convert other individuals and other interest groups to the support of normal institutional enlargement and betterment or their own personal interests¹

When educators, in cooperation with the public, evolve a common educational philosophy with objectives, problems, and means agreed upon, the school as a social institution is much more likely to receive the financial support it requires to perform the functions society has delegated to it. What is needed is cooperative educational teleosis.

THE INTERPRETATIVE PROGRAM

The need for interpreting the schools suggests the objectives of a program of interpretation. The essential purposes of such a program should be (1) to achieve a wider public understanding of the objectives, problems, and procedures of modern education in America, (2) to enlist an intelligent public cooperation in planning more effective educational programs, and (3) to gain a more liberal financial support of the schools so that needed educational services may be provided.

The means that may be used to interpret the school vary with the type and size of the community and with the character of the educational program. In general, however, it may be said that all the best procedures of adult education should be utilized and that the cooperative endeavor of pupils, teachers, the principal, and other school personnel, together with the participation of community-school groups, are needed for effective interpretation.

The Role of the Pupil—The value of an educational program should be measured not so much in terms of its philosophy, its personnel, its activities, or its school plant, as in terms of pupils who are the products of the program. After all, whatever may be said about the school, whatever means may be used to interpret or explain its program, the crucial factor, insofar as parents and the general public are concerned, is what happens to pupils while they are in school. The interpretative program of the school, therefore, should be concerned first of all with pupils, with their knowledge, their happiness, their personal adjustments, their attitudes toward teachers and administrators, and, in short, with the kinds of persons they are becoming. When an effective instructional program is

¹ MOEHLMAN ARTHUR B. *Social Interpretation* pp 107-108 D Appleton Century Company, Inc 1938

developing happy, well adjusted, enthusiastic, well informed, sturdy youngsters who are ready to face life with confidence and a reasonable probability of success, the pupils speak loudly on behalf of the school and its program and are the most effective means of interpretation. There is thus no substitute for effective administration and efficient teaching as the foundation for an interpretation program.

The first and most direct pupil interpretation of the school is made to parents in the home. Continually throughout the year there are pupil parent discussions of the schedule of activities, of teachers, of the administration, of teaching procedures, of relationships with other pupils as these are affected by teachers and administrators, of school marks, examinations, extraclass activities, cafeteria, library, physical education—in short, of the total administration and operation of the school.

Although many reactions of pupils toward the school may be prejudicial and although many pupil descriptions and interpretations of procedures may be erroneous or only partially true, pupils nevertheless are interpreting the school to their parents. But regardless of the adequacy or inadequacy of verbal interpretations and descriptions, the results of the total influence of the school are often observable in the behavior and development of pupils themselves. Parents are keenly aware of such changes and commonly attribute them to the influence of the school. The influence of pupils in interpreting the school to their parents was studied by Farley,¹ who found that "the longer pupils are in attendance at school the more thoroughly are their parents acquainted with school affairs."

The interpretative influence of pupils is not confined to the home. Junior high-school pupils are entering upon a period of enlarging community contacts and social interests. Child society is itself a reflection of school procedures and morale. As pupils move about the community, engaging in various activities and interests, they unconsciously interpret themselves as the products of the junior high school. The individual and group conduct of pupils on the road to and from school, in public conveyances, on playgrounds outside school hours, in libraries, stores, shops, and churches all provide opportunities for public judgments of school life and of the effectiveness of the school program.

¹ FARLEY BELMONT, *Interpreting the Secondary School to the Public*, *Bulletin*, 1932, No. 17, *Monograph* 16, p. 101, U. S. Office of Education, 1933.

The development of a spirit of school loyalty and of group morale is an essential factor in the successful administration of any junior high school, and such loyalty and morale determine in large measure the interpretative influence of pupils in the community. School loyalty should involve an appreciation of public sacrifices to provide the pupils with excellent educational opportunities, and it should involve a high regard for public attitudes toward the school and toward pupils. The spirit of school loyalty among pupils will quickly be reflected from that which is evidenced by teachers and administrators, but through various means, pupils must be shown the dependence of school services and activities upon public attitudes and support. Junior-high school pupils are old enough to appreciate the cost as well as the educational values of many school services. Only through an understanding of the basic relationships of the school to the community can pupils be led to develop a sense of shared responsibility for the successful operation and interpretation of the school. It is therefore important that attention be given to the development of these understandings so that pupils may appreciate their individual part in creating a proper public attitude toward the school.

Pupil-group Contacts—The public is particularly observant of pupils in various official and semiofficial group activities. The conduct of pupils on educational excursions makes a strong impression upon the public. Frequently it is necessary for pupils to be transported in buses or other public conveyances from the school to their excursion points. Proper conduct on these occasions creates a desirable impression toward the school. In their behavior at a manufacturing plant, for example, pupils can reflect a serious-minded interest in the processes they are studying and thus impress adults with the value of such activities as opportunities for learning. Pupils should evince an interest without becoming nuisances, and through their courteous behavior and appreciative attitude reflect the efforts of the school to develop worthy young citizens.

Similarly, the group conduct of pupils during assembly programs to which the public has been invited has a marked influence upon the reaction of the public toward the school. Ill-mannered, boisterous, disturbing behavior is interpreted as representative of the general conduct of pupils in all school activities. On the other hand, courteous, gentlemanly conduct, with marked consideration for the comfort and well-being of adults, creates a favorable impression upon the audience. The conduct of junior-high-school pupils

before, during, and after their own athletic activities, as well as those of the senior high school, reflects the standards of conduct maintained by the school.

The public judges the school from the behavior of youth, individually or in groups. Thus, for example, the conduct of pupils at theaters, concerts, lectures, or other public performances is often regarded as conduct similar to that which is allowed in the school itself. The Saturday motion-picture matinee often tolerates or encourages group behavior that is inconsistent with school conduct, and yet the public often interprets uncontrolled behavior in the theater as an indication of the training that is given by the school. Perhaps the public is justified in this interpretation, for if school habits and attitudes do not carry over into civil life outside school, the training that is being given may not be very effective.

Pupil Publications—Many of the more interesting planned efforts of pupils to interpret the school are to be found in pupil publications. Chief among the journalistic efforts of pupils are school pages in daily newspapers, school newspapers, school magazines, semiannuals, annuals or yearbooks, and special handbooks, bulletins, leaflets, and programs. Under an appropriate faculty supervision of capable pupils, each of these types of publications can contribute to a better understanding of the school on the part of pupils and the public.

The school page in the local newspaper offers pupils an excellent opportunity for training in journalism and provides an unusually fine medium for presenting news and feature stories of the school. It is important, of course, that the faculty sponsor of this work be thoroughly competent in the selection and preparation of news copy and that all relationships with the local papers be conducted in a businesslike manner. Because of the wide public interest in the schools, newspapers are glad to publish school news when it is properly prepared and when it is news. The importance of the daily newspaper in social interpretation has been emphasized by Moehlman.¹ The techniques of preparing appropriate school news are discussed both by Reeder² and by Grinnell.³

School Newspaper—The junior high-school newspaper itself may be made an effective instrument of interpretation. Because

¹ MOEHLMAN, *op. cit.*, pp. 288-406.

² REEDER, WADE G., *An Introduction to Public-school Relations*, 260 pp., The Macmillan Company, New York, 1937.

³ GRINNELL, J. EARLE, *Interpreting the Public Schools*, pp. 74-167, McGraw-Hill Book Company, Inc., New York, 1937.

the school paper so definitely reflects pupil attitudes and reactions, it may be considered one of the more significant mediums of pupil interpretation. Although the interpretative function of the school paper should not be considered the most important contribution of the paper, the faculty sponsorship can help pupils appreciate and recognize its interpretative value without detracting from its other values. Papers of high journalistic style and content that accurately depict the more worth-while events and activities of school life are read with interest in the homes of large numbers of pupils and serve as a basis for parent-pupil discussions of the junior high school. With reference to the interpretative function of school newspapers, Grinnell says, "The newspaper that takes its rightful place in the school community explains school policy, recounts innovations in curriculum; marks changes of all sorts while they are taking place, gives facts about new activities; honors pupils and teachers who achieve distinction, campaigns staunchly for its ideals of a better school, and other ideals."¹

Other Publications—In many junior high schools, the annual or the semiannual occupies a place of distinction among school publications. When the annual is carefully prepared so as to sample cross sectional aspects of the whole school, it becomes a review of the year's activities, developments, and achievements. Often such a summary treatment of trends makes a valuable supplement to the more continuous newspaper accounts of activities. If this publication is to serve as an effective interpreter of the school it is necessary that it be produced on a high plane of excellence. The organizations of pupil groups concerned with various pupil publications are discussed in Chap. IX. Like the newspaper and the annual, all pupil publications may contribute to the interpretative program of the school. Thus cognizance should be taken of the possible influence on adults of special handbooks, orientation bulletins, printed programs, special leaflets, and other miscellaneous publications that find their way into the community. Not only is the content of these publications revealing but so also are the form, the style, and accuracy of the materials. Regardless of the pressure of time, all pupil publications should be free from spelling or other grammatical errors. Rigorous editing is time-consuming on the part of faculty sponsors, but this practice sets high standards for pupils to maintain and creates a favorable impression upon the public.

¹ GRINNELL, *op cit*, p. 169

Pupil Performances Outside School—Many community organizations are interested directly in pupil activities and in the performances of pupil groups. Among these should be mentioned service clubs, fraternal orders, parent-teacher organizations, and churches. Activities that are of particular interest include the performances of hands, orchestras, choral and glee clubs, dramatic performances, instrumental or vocal solos by talented pupils, pupil speakers for special occasions, gymnastic exhibitions, dancing pageants, and special exhibitions of the creative work of pupils in both fine and practical arts.

The pupils themselves should not be expected to make arrangements for public performances or for the demonstration or exhibitions of their special talents and achievements. Such arrangements should be considered the responsibility of administrators who are already in contact with community organizations. Considerable importance should be placed upon the manner in which arrangements are made for the appearance of pupil groups before community organizations. The welfare of the pupils themselves should be given first consideration. The number of such performances should not interfere too greatly with the regular class activities of the pupils. Similarly, the number of such activities should not be so great as to assuage the interests of the public.

It is exceedingly important that the standards of excellence for such performances be held at a high level. Organizations that are visited by pupil groups should enjoy thoroughly and profit from the occasion and should be made to feel that they are being honored by the appearance of pupils. Under no circumstances should the principal allow pupil groups to appear before a community organization when the attitude of the organization is one of tolerance or of accommodation to the school or to the pupils. The faculty member who is in charge of a pupil performance in the community, whether he is the principal or the sponsor of an extraclass activity, should stay in the background and allow pupils to assume the place of prominence. Pupils should be courteous and should show mature social interests in meeting adults before and after the meeting. Conducted in this manner, pupil performances create favorable adult attitudes toward the entire school program.

Radio Programs—Many local and network broadcasting organizations are donating radio time for school performances that are of sufficient merit to challenge public interest. Public-speaking, drama, and instrumental and choral programs of various kinds are

being scheduled as productions of local schools. Not only are these programs of interest to the general public but they also provide excellent opportunities for pupils to interpret aspects of the school to the public. The radio is an excellent medium for special interpretative programs that have been carefully planned and well prepared in advance of the broadcast. Because of the newness of the radio in education, its remarkable facility as a means for interpreting the schools is not widely appreciated. Its potentialities deserve serious study and planning by educators. With the development of more effective pupil programs, a wider use of the radio may be anticipated.

The Role of the Teacher.—Increasingly, educators are becoming aware of the importance of interpreting education to pupils directly. Junior high-school pupils are sufficiently mature to understand the function of education in democracy, the nature of state and local school organizations, and the cost and sources of financial support for education. Through their participation in the administration of the local school, pupils gain a better appreciation of necessary administrative controls, and through other projects they gain a better appreciation of the relation of the school to the community.

In his study of secondary schools, Farley¹ found that approximately 90 per cent of the junior high schools had organized specific programs to interpret education to pupils. Various plans are used for this purpose. Direct instruction may be provided or extraclass activities may be guided toward this end. Outstanding among such extraclass activities are pupil publications, assembly programs, club activities, and exhibits.

Pupil projects associated with school publications appear to be the most effective way of promoting an understanding of education among pupils. Such projects may combine extraclass interests with the regular classwork in English, social studies, art, typing or print shop, and homeroom guidance. Pupils need to understand the objectives of education as these are related to the activities of the school in order to interpret and explain them to others through pupil publications. The pupil interest, enthusiasm and cooperation that are engendered by a better understanding of school problems influence every aspect of their schoolwork and are reflected in their interpretation of the school to parents and to the community as a whole. Teachers must assume a large measure of the responsibility of interpreting the school to pupils, although the

¹ FARLEY, *op cit.*, p. 60.

principal must assume the final responsibility in this important matter.

In addition to direct interpretation to pupils, the role of the classroom teacher as an interpreter of the public school is centered in three principal types of influence. These are (1) teacher-pupil relationships, (2) teacher-parent contacts and relationships, and (3) teacher-community activities and relationships.

Teacher-pupil Relationships.—The reactions of pupils toward their teachers, whether teachers are liked, tolerated, or disliked, whether they are respected or ridiculed, whether they are considered good or poor teachers strongly affect the public-relations program of the school. Perhaps the first and most important duty of teachers is that of establishing harmonious effective working relationships with pupils. Such relationships affect the influence of the teacher as an interpreter of the school just as they do his influence in more formal schoolwork. The attitudes of pupils toward teachers often are a direct reflection of the teacher's attitude toward them. A friendly, sympathetic understanding of the interests and needs of each pupil encourages the respect, confidence, and good will of pupils. It is therefore of particular importance that teachers learn to know their pupils personally and intimately as early in the semester as it is possible for them to do so. This friendliness involves a knowledge of the home conditions and of community influences which affect pupils, just as much as it does a knowledge of the present abilities and interests of the pupils themselves. In general, the attitude of the teacher should make each pupil feel the teacher's sincere interest in him, and it should create an interested, happy outlook among pupils toward the school.

The appearance of the classroom can have much influence upon the development of desirable attitudes toward the school and upon desirable teacher-pupil relationships. Classrooms that are attractive, interesting, and cheerful create a favorable atmosphere among groups and strongly influence many individual pupils. It should be remembered that for many pupils the school is the most attractive, most pleasant, and the most comfortable part of their physical environment. Even though school buildings may have poor equipment and poor lighting or may be obsolete, the resourceful teacher can do much to create an artistic, attractive classroom through the use of flowers, pictures, and inexpensive decorating effects. In this decorative effort, teachers should enlist the cooperation of pupils so

that there may be a shared responsibility for the appearance and atmosphere of the classroom

In their guidance or counseling activities, teachers find innumerable opportunities to help pupils with their personal problems and adjustments. Appropriate respect for pupil needs for independence, self-determination, and self-development goes far toward creating desirable relationships of mutual confidence and respect.

Teacher-parent Relationships—In addition to their manifold duties at school, teachers are being encouraged to visit the homes of pupils to gain a better understanding of conditions affecting pupils and to create pleasant cooperative relationships between the home and the school. Such visitation has a definite place in the interpretative program of the school.

Evidences of parental misunderstandings or of parental antagonisms toward school policies, objectives, or procedures often are discernible in the attitudes and behavior of pupils in the classroom. In such cases, the teacher should visit the home and make every effort to develop a better understanding of the school program. By making the most of all casual social contacts with pupils and with parents, the clever, socially competent teacher can develop situations that frequently result in invitations to visit the home and share with pupils the pleasures of some hobby or project being carried on at home. Thus, as an outgrowth of satisfactory teacher-pupil relationships, there may be many opportunities for teachers to become acquainted with parents and to gain their cooperative support in the work of the school. Not infrequently parents blame the school for the growing independence of junior high school pupils and for the resulting lack of parental control. Often parental cooperation is needed to regulate pupil behavior at school. In such cases, it is highly desirable for the home and the school to work closely together to bring about satisfactory adjustments of the pupil, of the home, and of the school.

Parents should be encouraged to visit the school individually and in groups, in order that they may inspect regular classwork as well as enjoy or participate in special programs and demonstrations. The interest of parents in visiting the school often may be aroused by the enthusiasm of pupils in the work they are doing. Parental visits may be encouraged through direct suggestions or through invitations to room exhibits, project activities, pageants, dramatic or musical programs, social affairs, or class parties. In such cases,

invitations may be prepared by the class and sent home with each pupil. These occasions enable teachers to meet parents on an informal and friendly basis.

Special school programs and activities such as public assemblies, dramatic performances, operettas, and other musical performances attract many parents to the school. On such occasions teachers may create opportunities to meet parents and to establish more cordial relationships with them. Highly desirable also is a more active participation by teachers in the activities of parent-teacher organizations. Not only should teachers attend these meetings but they should hold office and participate actively in programs. Some school systems elect teacher representatives to attend regional and state conventions of the Congress of Parents and Teachers. Local meetings of parent-teacher organizations provide one of the easiest and most natural means of becoming acquainted with parents and of interpreting the schools to them.

The professional attitude and manner of the teacher should reflect his regard for the importance, position, and responsibility of the parent in the total school-community situation. In general, the manner of the teacher should reflect a cordial, courteous, personal, and professional interest in pupils and parents. The manner of the teacher should be such as to welcome the acquaintance of the parent and to establish a feeling that both are working on a joint enterprise in the interest of the pupil, the school, and the community. Although the teacher may have the advantage of greater knowledge and experience in many technical problems, such advantage should not be reflected in an attitude of superiority. Teachers should remember that frequently parents have the advantage of many experiences and knowledges that teachers do not possess.

Parents do not visit the junior high school as frequently as they do the elementary school. Fewer parental visits may seem to indicate a lessening of interest in school affairs. It is not likely that this is the entire explanation, however. It must be remembered that junior high-school pupils are experiencing an intense desire to appear grown up and hence independent of parental control over or "interference" in school affairs. Frequently pupils request their parents not to visit the school for fear that they will "lose face" in the estimation of other pupils. The understanding teacher can do much to overcome situations of this nature by inviting parents to visit the school in groups and by respecting the pupil's desire for independence.

Teacher-community Relationships—Teachers are employed by local communities as agents of the state to teach and lead the young toward the better life in a democracy. The full effectiveness of the teacher's responsibility in this capacity cannot be realized unless the teacher has an intimate knowledge of the community and participates actively in community affairs. Not only are teachers expected to fulfill the usual duties of citizenship but they are expected to assume places of leadership in various social and civic efforts to improve the community. Furthermore, the school is constantly being judged by the personal and public behavior of teachers as citizens in the community. Their social manners, personal habits, mode of dress, respect for social customs, and loyalty to the community all have direct bearing upon public attitudes toward the school. Teachers must remember that the social status and respect with which the general public regards all professional persons demands an abridgment of many personal rights and much individual freedom, and hence the public and private life of the teacher exerts a strong influence upon his professional status in the community and upon the public interpretation of the school.

The Role of the Principal.—By reason of his official position, the principal must assume a major responsibility for interpreting his school to the community. In this he must cooperate in the larger interpretative program that is being directed by the superintendent of schools. In harmony with the city-wide program, the first responsibility of the principal is that of planning and coordinating effective procedures that include the entire school staff and all school activities. In addition to planning and coordinating the interpretative efforts of others, the principal should assume responsibility for interpreting the school and community to pupils and to teachers, and he should use various means of interpreting the school to the community directly.

The importance of developing among pupils an understanding of education in general, and of the local school program in particular has already been mentioned. Responsibility for planning and scheduling school activities that will lead to a fuller understanding of educational problems must rest with the principal. The organization of instructional units relating to education and the scheduling of projects and activities of pupils vary in proportion to the interest, direction, and financial support given to them by the principal.

Interpreting the school and the community to teachers should be a continuous and purposeful program accomplished through

faculty meetings that are given over to discussions of specific educational issues, local school problems, and general community conditions, such as tax levies, community surveys, family income, housing, recreational facilities, employment, and other factors affecting youth, the school and the community. Through special bulletins to teachers and through others to pupils, the principal may analyze and interpret many school problems that need to be understood in order for the school program to be successful.

In addition to his efforts to interpret the school to teachers and pupils, there are three important means that the principal may use to interpret the school to the community. These are (1) through the management of his office, (2) through a wider community use of the school plant, and (3) through active participation in community affairs.

The Principal's Office—Many initial public impressions of the school are gained through personal or telephone contacts with the principal's office. It is therefore important that the principal's office be conducted so as to create desirable reactions toward the school. Of particular importance are the attitude and manner of the school secretary in answering the telephone, in meeting visitors, and in making appointments for the principal. The outer office should give the impression of efficiency and of professional activity. The secretary should greet callers promptly and courteously and see that their needs are provided for as expeditiously as possible. In like manner, the principal should be available to callers with minimum delay. All appointments should be kept, and, in spite of the exacting duties of his office, the principal should make it easy for parents and other visitors to see him without appointments. Although many of his duties take him from his office, it should be possible for the secretary to get in touch with him in emergencies. The appearance, the atmosphere, and the effectiveness of the principal's office thus mirror the administrative efficiency of the entire school and create lasting impressions upon the public.

Community Use of the School Plant—Meetings of parent-teacher organizations and other official gatherings of parents and the public at school affairs such as open house, plays, pageants, and special programs provide the principal with unusual opportunities to interpret the school. In these affairs, the principal should assume the role of official host and should be assisted by a reception committee of teachers and pupils to help in greeting parents and visitors and in making them welcome. He should arrive early, be

free from administrative details, and meet as many parents as possible, but he should avoid entering into lengthy discussions of pupil or school problems with one or a few individuals. Usually, the principal should not preside over meetings but should arrange for parents, pupils, or teachers to preside or to assume a place of prominence on the program. If the principal makes a formal appearance, his greetings should be brief, appropriate, and sincere.

The Principal in the Community—In his role as an educational leader of the community (Chap. XIII), the principal with initiative may create many opportunities to interpret the school to the community. Frequently the principal is called upon to address public meetings on cultural topics or to explain school policies, expenditures, and programs or in various other ways to inform and interpret educational matters to the public. Such addresses reflect the quality of his intellect, his culture, and his social and educational philosophy. The reaction to the principal that is gained through such meetings colors the judgment of the public concerning the entire school.

Although pupils, teachers, and the principal all have special individual parts to play in the program of interpreting the school, for greatest effectiveness the activities of all need to be coordinated in a purposefully planned program. Large-scale school activities reveal to the public the extent to which the entire personnel of the school can work together for successful service to pupils and to the community. Special opportunities for such cooperative efforts are to be found in public assemblies, in various exhibits, and in demonstrations. Some principals find it advantageous to extend the influence of these performances by making electrical recordings that may be reproduced before service and civic clubs, fraternal organizations, and parent-teacher associations. Recordings of pupil-assembly programs are of particular interest in this regard. Further opportunities for interpretation are found in many large-scale affairs that are given outside the school, such as pageants and other presentations that possess interest and entertainment value for the public. Probably the most influential, cooperative work of the school is to be found in the general democratic administration of the school that provides for the active participation of pupils, teachers, administrators, and the community all working together in various ways to understand and solve common problems of education.

SUMMARY

Social change from an agricultural to an industrial age has been accompanied by corresponding changes in education. Because of the complexity and technical nature of modern education, intelligent participation in local control over the public schools has become increasingly difficult for the average citizen, and yet the services of public education are limited by the values that are placed upon them by the average citizen.

All educational progress thus is dependent upon the understanding of the essential nature of educational functions by the general public. Through democratic procedures, agreement is needed among educators, social leaders, and the public with respect to the objectives, problems, services, and procedures of public education. As a part of their service ideal, the educational profession is assuming increasing responsibility for interpreting the schools to the community.

Various educational and informative procedures may be used to interpret education, but the cooperative efforts of the entire personnel of the school are needed for an adequate interpretative program. The pupils are the most effective agents in this program. However, teachers, the principal, and other school personnel all share responsibility for more fundamental aspects of the program.

Through an intelligently planned and cooperatively implemented program of interpreting the schools, there should result a greater degree of understanding of the function of general education and of the needs, purpose, and problems of the local school throughout the entire school community. Such increased understanding should bring about more intelligent and critical appreciation of the school, a greater recognition of the part that all school personnel play in the life of the community, a wider and more constructive use of the school as a force in the community, a more adequate financial support of the school program, and an extension of the scope and effectiveness of school services.

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CHAPTER XVII

THE FUNCTIONING SCHOOL PLANT

In a very real sense, junior high-school education is influenced by the character of the school plant in which it is housed. This influence may facilitate or impede the realization of the planned educational program. Evidence of the direct relationship between educational programs and school plants may be seen in the parallel stages of their development. Similarly, educational programs have influenced school buildings. Throughout the evolution of American education, there has been a reciprocal influence between school plants and educational programs. As new subjects and services have been added to school programs, as administrative policies and teaching methods have changed, as teacher pupil-community relationships have broadened, so, too, have school plants evolved.

Junior high-school education has certain functions to perform that are different from those of any other unit in the American plan of education. If pupils are to receive the greatest possible benefit from their educational experiences, if they are to enjoy their school and develop into well adjusted personalities capable of meeting life's problems, if, in brief, the junior high school is to realize its objectives, the entire school plant must be planned to facilitate the total program of the school.

School plants that facilitate educational programs must be planned in the light of clearly defined educational philosophy, objectives, and policies underlying the total program. Educational programs designed to serve an ever-changing complex society are in themselves characterized by change and improvement, and hence school plants must be as adaptable and flexible as possible so as to provide for present needs and to anticipate future developments. Increasingly, modern architectural trends are toward the construction of functional buildings designed to serve specific needs. Wide public recognition of the importance of functional design in modern architecture is reflected in all aspects of modern building construction for industrial, commercial, and residential purposes.

Schoolhouse planning that will meet effectively the educational needs of the community must be done cooperatively by educators,

engineers, and architects. Complete and adequate planning cannot be done by one profession alone, each has its contribution to make and its responsibilities to perform. Regardless of how well local school personnel may have planned an educational program in conformity with the needs of the community, they must interpret that program if an efficient school plant is to be built. Even though the architect may be extensively experienced in planning school buildings, he should not be expected to create a functional school plant without the guidance of local educators. Educators, familiar with school plant needs, should interpret them to engineers and architects in the light of plant-space requirements and relationships. Since this is to be a cooperative endeavor of all school personnel, it is important for the superintendent, principals, and teachers to know the problems of school housing relating to their respective fields.

FACTORS INFLUENCING SCHOOLHOUSE PLANNING

Five related factors commonly influence schoolhouse planning. These are (1) the type of educational program to be offered, (2) general population trends and growth trends in the local school community, (3) the ability and willingness of the community to pay for the educational program, (4) the approximate cost of the school plant and the methods of financing, and (5) the size and type of the school plant needed in the light of the functions it is to perform in the total educational program.

These factors are so inextricably woven together that no one factor can properly be considered alone. The type of program that is planned will obviously reflect the philosophy of the local school personnel, but it should likewise be in accordance with the ability of the community to support the building program. The extent of this program will necessarily be influenced by general population trends throughout the country and by the specific population trends in the local community. Some changes in the school population of local communities are of a gradual, long time character, others occur with unanticipated abruptness as a result of new commercial and industrial developments in the community.

Insofar as it is practicable, school buildings should be constructed at a time most favorable from the standpoint of both building construction costs and economic conditions in the local community. Frequently such procedures mean staggering the construction program by building in units to satisfy partial needs at a particular

time. School districts differ greatly in their ability to pay for their school plants because of differences in the amount of their wealth and resources. The ability and willingness of communities to pay for needed school plants depend upon the time of construction and the method of financing capital outlay. The willingness of the community to pay for its educational needs will depend to a large degree upon how well the schools have been interpreted to the public. Interpreting the school needs should be a continuous educational process rather than a short, intensive campaign. No one method of financing capital outlay can be best for all communities for all times. The plan of financing, as well as the size of the immediate building program, should always be determined in the light of general economic conditions and interest rates on money. Thus it is important to be cognizant of all factors that affect the adjustment of the school building program to economic conditions.¹

THE SCHOOL SITE

The tentative selection of the site for a new school involves a consideration of size of grounds needed for the projected building and playgrounds and the location of the site in the community. Factors that influence the size of the school site involve provisions for present school populations, as well as provisions for probable future pupil populations and the nature of the planned educational programs. Together, these factors affect the size and type of the school building, the size of the building rectangle, and the plan of construction. Other factors that affect the size of the site are the topography, the location of the building on the site, and the cost and availability of land.

The size of the site should permit the location of the building in conformity with the desired architectural design, so as to leave several feet between any part of the building and the street. The area between the building and the street reduces street noises that reach the classrooms, provides a safety zone through which pupils must pass before reaching street traffic hazards, and makes possible the desired landscaping. Sufficient area is required for ample walks, service driveways, automobile parking areas, and experimental

¹ STANDLEY, L. L., *The Adjustment of School Building Programs to Economic Conditions*, unpublished doctoral dissertation, School of Education, University of California, Berkeley, Calif., 1933. For summary discussion, see "The National Society for the Study of Education," *Thirty-third Yearbook*, Part I, "The Planning and Construction of School Buildings," Chap. 34, pp. 329-333, Public School Publishing Company, Bloomington, Ill., 1934.

horticultural gardens The entire site should be well drained and graded for its various uses, and it should be adequately and artistically landscaped Well-surfaced walks and driveways should expedite traffic and promote safety The school site should not be transversed by a public thoroughfare because of traffic hazards to pupils

A diversified and complete physical-education and recreation program for all pupils requires a playground area of adequate size and topography These grounds should be of sufficient size and arrangement to provide separate play areas for boys and for girls when desired for certain activities To promote safety and to carry out the physical-education and recreation program, all play areas should be adequately surfaced and fenced in accordance with the standard requirements of the activities for which they are to be used

The location of the school site involves a consideration of the trends of school population growth and distribution in the community, the immediate environment of site, traffic arterials, flow of traffic, topography, drainage, soil and subsoil of the site, and cost and availability of prospective sites Sites should be located so as best to serve the present and future enrollments of the school with regard to travel distances, traffic hazards, and transportation accommodations It is desirable to select the school site conveniently near transportation lines but at least one block from main thoroughfares in order to reduce traffic noises and hazards It is also desirable, insofar as it is practicable, to locate schools so as to avoid the disturbing noises, smoke, odors, and dust of factories and the close proximity of commercial enterprises such as pool and dance halls and liquor establishments The topography, drainage, topsoil, and subsoil of sites should facilitate the construction of buildings and adequate playgrounds It is usually necessary to make compromises in regard to some of these considerations in order to avoid greater sacrifices with regard to others

THE SCHOOL BUILDING

The school building should provide pleasant, attractive, and artistic housing that promotes safety, sanitation and health, effectiveness in the educational program and community use and efficiency in operation and maintenance

The school building should conform to the types and standards of the community, if it maintains high standards of architecture, otherwise wherever possible, the school building should set an

example for community improvement through its simplicity, beauty, and efficiency of design

The Size and Type of the School Building—The size of the school building is determined by the present and predicted enrollment, by educational objectives and procedures, by the ability and willingness of the community to pay, by present and predicted future building-construction costs, and by standards of school building requirements for each educational need. After the approximate size of the school building has been determined, decision must be made as to the type of plan, type of construction, and height of building.

The height of the building should be determined by the type of plan, size of building and site, climate, immediate environment, topography of site, type of construction, and facility in use. Low buildings scattered over large areas increase heating costs, are difficult to administer and use, and cause inconveniences in inclement weather. One-story buildings are best adapted to small schools in mild climates having little rainfall and to communities having a large site available at a reasonable price.

Plans of school buildings are designated by letters roughly approximating the outline of the building floor plan. The more common plans are thus designated by the capital letters E, H, I, L, T, and U. Various modifications or combinations of the regular plans are commonly used. The type that is most suitable to local needs will depend upon the height and size of the building, the orientation of the building and site, the topography, the size and shape of the site, the climate, and the type of construction of the building.

Another variable influencing schoolhouse planning is the type of construction that is to be used. Types of construction are classified according to the varying degrees of fire-resistive material used. The American Institute of Architects classifies buildings into A, B, C, and D types. Thus, for example, a building of type A is constructed entirely of fire-resistive materials, including roof, windows, doors, floors, and finish. However, many school buildings do not belong to any one of the clearly defined letter-designated types. They do not meet all the requirements of one type but are superior to the requirements of a lower type.

The type of construction is dependent upon the size and height of the building, the hazards of the environment, and legal standards, furthermore, the type affects the cost and relative safety provided

Large or high buildings constructed of combustible materials are more hazardous than relatively small one-story buildings of the same materials. Buildings in congested areas require greater conformity to the class A type of construction than do buildings in less congested areas. In localities most subject to earthquakes or any other specific building hazards, careful consideration should be given to the findings of engineering science with respect to safety.

It has already been pointed out that the functioning school plant should be designed to implement the particular educational program of the local school. Buildings may be provided with many specific features that will expedite desirable school procedures. The great majority of these useful features can be provided in new buildings with little or no extra cost if included in the original planning. The following description of aspects of the school building suggests various newer features and arrangements that have been found to facilitate educational programs. Some of them may appear idealistic, others are indispensable. It should be realized that practical compromises are necessary in planning a new junior-high-school building. The building features here proposed will implement the kind of junior high-school education that is projected in the present volume.

Entrances and Exits.—Adequate entrances and exits should be provided to expedite the normal flow of traffic and to care for emergency situations with utmost safety. All exit doors, including class doors, should open outward and should be provided with safety bolts that prevent doors from being locked as exits. A panic bar attached to a panic bolt should be placed about 3 feet from the floor across the inside of each exit door through which heavy traffic passes. Each panic bar should be adjusted to release the panic bolt readily when a pupil places his body against the bar. All glass in these doors should be wire-reinforced plate glass, placed well above the panic bars. Permanent catches should be provided for each exit door so that the door can be held open for heavy traffic. An exit light should be placed directly above each exit door inside large rooms such as auditoriums and gymnasiums.

Corridors—School corridors should be planned to accommodate traffic under various conditions, therefore the width of each corridor should depend upon the service it is to perform. Main corridors without lockers should be at least 12 feet wide, and those with lockers should have sufficient additional width to allow for opening the lockers. Additional width directly in front of auditoriums, gym-

nasiums, and main offices should be added to corridors. All floors, walls, and ceilings of corridors should be of fire-resistive materials. The floor materials should be chosen to promote safety, sanitation, and quiet. Folding iron gates should be installed in corridors, where needed, to close off portions of the building, such as the auditorium or gymnasium, for use after regular school hours. Provision should be made for folding these gates into wall recesses when they are not in use.

The doors of all exits into corridors from rooms used by pupils should swing outward in the direction of the traffic, and they should be provided with permanent catches to hold opened doors against the walls.

Since corridor walls are retaining walls, they are thick enough to contain heating and ventilating ducts and to provide space for recessing lockers, display cases, fire-protective apparatus, and drinking fountains. Bulletin boards should be placed along a large part of the available portions of the corridor walls. A generous number of display cases should be located in places where spectators may view exhibits with minimal traffic interference. The front of each case should be inset slightly and protected by iron railings flush with the surface of corridor walls. Both corridor display cases and bulletin boards serve as a means of exhibiting the work of pupils, awards and trophies of pupils and school, posters and announcements advertising school and community activities, and displays of books and other commercial materials of instructional value. The display of these materials is valuable for instructional purposes, for promoting school morale, and for interpreting the school to the public. Thus corridors may serve further purposes than as arteries for traffic.

Pupils' Home Lockers—Each pupil should be provided with locker space for the storage of articles of clothing, lunches, and general instructional materials. In order that pupils may have access to these lockers without entering classrooms, some of the lockers may be recessed in corridor walls and others installed in locker alcoves, distributed along corridors at various places throughout the building. It is desirable to have individual metal lockers of a size not less than 12 by 12 by 60 inches, with a shelf near the top for storage of small articles and with louvers for ventilation.

Stairways and Ramps—Adequate stairways or ramps should be distributed throughout the building to care for traffic under all circumstances. Buildings of more than one story should have at

least two stairways or ramps that are well separated, so that one is available if the other should be closed by an emergency. All stairways above the ground floor should permit direct passage from the ground floor to the top floor.

Stairways should be constructed of fireproof material, and the treads should have a nonslip surface. No well holes should exist between stairways. The width of stairways should satisfy traffic needs and should conform to the width of the corridors that they serve. Substantial handrails should be provided on each side of all stairways. Center hand rails should be installed on all stairways more than 8 feet in width. All stairway landings should be as wide as the stairways themselves. Steep stairways are hazardous and should be avoided. The accepted standards¹ are a 10-to-12-inch tread and a 6-to-7 inch riser. Curved stairs should not be built except to places of very limited use. All junctions of treads, risers, walls, and floors of stairways, landings, and corridors should be curved in order to make cleaning easy.

Where differences of elevation of only 1 or 2 feet exist, ramps should be used in place of stairways. Ramps are sometimes advantageous from one story to another in certain types of buildings. They may make vertical traffic easier than stairs but frequently increase horizontal traffic because of the more gradual slope required in the construction of ramps. It is highly desirable to make provisions for one special-entrance ramp to the main floor for the use of crippled pupils. A freight ramp or elevator to the basement for conveying supplies to the storeroom is also desirable. Ample service driveways should lead from the street to all such ramps and elevators.

All stairways, ramps, and corridors should be well lighted naturally and should have sufficient artificial illumination to provide at least 4 foot-candles of light at all places even at night. This standard of illumination promotes safety, makes possible proper cleaning of corridors and stairways, and permits the use of bulletin boards. Bulletin boards and display cases may have additional illumination with separate controls. The lighting fixtures should be staggered on different switch controls to supplement natural lighting as needed and to provide for various types of evening use.

Basements.—The use of basements or rooms partially below ground level for classrooms should be avoided. Whenever practical,

¹ ENGELHARDT, N. L., *Standards for Junior High School Buildings*, p. 49, Teachers College, Columbia University, New York, 1932.

such space may be used properly for heating and ventilating plants and for storage of supplies and equipment. Heating and ventilating plants should be enclosed in fireproof rooms, provided with self-closing fireproof doors. Basement floors and walls should be concrete and waterproofed.

Fire-protection Systems—It is exceedingly important to provide adequate fire-protection systems. Fire hose and portable chemical fire extinguishers should be well distributed in corridors throughout the building, and fire extinguishers should be placed on the stage and in the main part of the auditorium, in the gymnasium, library, and in other large rooms. Fire-alarm boxes connected with a building fire-alarm system should be distributed at various strategic places throughout the building. This system should be connected with a gong having a sound distinct from any other gongs in the building. Automatic sprinkling systems are desirable, especially in rooms containing highly combustible materials and in other places where fire hazards are great. These sprinklers and the building alarm system should be connected with each other and with signals in the local fire department so that when a fire starts the sprinklers, the building fire gongs will sound, and the fire department will receive the alarm. The fire department also receives the alarm when sounded from regular signal boxes throughout the building, therefore provision should be made for sounding the building fire alarm from the main office of the school for fire-drill purposes.

Well-systematized fire drills should be held regularly. Every occupant except the person giving the drill should assume that the alarm is a signal for a real fire and should leave the building promptly and orderly and remain a safe distance from the building until the established signal is given to return. Teachers should be the last persons to leave their classrooms. Too frequently many benefits of fire drills are lost because teachers, secretaries, nurses, and custodians, as well as pupils, regard the alarms as signals for fire "drills" in place of alarms for real fires.

FUNCTIONAL RELATIONSHIPS OF ROOMS

The location of the rooms in a school building directly affects the efficiency and ease of their use and likewise the efficacy of the educational program. Rooms that have a close functional relationship can serve their purposes to a higher degree when located as a unit or suite. Examples of such room relationships are found in functional units or suites used for administration, auditorium and music,

library, physical education, cafeteria, household arts, and in various others, depending upon the nature of the local school program.

The Administrative Unit.—The administrative unit of a modern junior high school should consist of several rooms, the size and number of which will depend upon the educational program, enrollment, and the administrative policies of the school. The location of these rooms should be planned to expedite their general use and to promote functional relationships among administrative personnel. The administrative unit includes (1) the general reception room or lobby for pupils and for the public, (2) the secretary's office, workroom, storage room, and cloakroom, (3) the faculty reception and service room, (4) the principal's office, conference room, lavatory, and cloakroom, (5) offices for the coordinator of extraclass activities, counselors, vice-principals, and deans, where such positions exist, and (6) the attendance office and health quarters, with a shared reception room.

The center of the administrative unit is the general reception room or alcove, which should be in a prominent place, readily visible by strangers as they come into the main entrance of the building. The secretary's office should be connected with the reception room so that the secretary or her assistants may greet pupils or the public and direct them to the proper personnel. At one end of the secretary's office should be the faculty reception room, separated from the secretary's office by a counter and a glass partition. Both the secretary's office and the teachers' reception room should have access to the storage room, workrooms, and the principal's office. Adjoining the principal's office should be a conference room in which he may meet comparatively large groups of pupils, teachers, and parents.

On the side of the general reception room opposite from the secretary's office should be located the offices of vice-principals, deans, the coordinator of extraclass activities, and counselors. These offices may be relatively small and may be reached by an inner hallway leading from the reception room. Chairs may be placed here for the use of persons waiting to confer with the personnel of these offices. Such location permits these offices to be served by the school secretary and her assistants and gives the personnel of these offices ready access to office records, to the principal's office, and to each other. Beyond these offices at the end of the inner hallway may be placed the attendance office and the health quarters, which are separated by a special, shared recep-

tion room. This special reception room tends to relieve the general reception room and the main corridor of congestion caused by pupils who at the time need the health or attendance services of the school. The particular location of these two offices, furthermore, makes them readily accessible to guidance and administrative personnel. Adjoining the nurse's office should be a physical-examination room and several isolation rooms.

Auditorium and Music Unit.—In a properly functioning junior high school the auditorium is in use almost continually. Large and small groups of pupils need auditorium facilities for developmental experiences that can be provided through no other means. Adults in the community frequently require a convenient auditorium for regular and special meetings of clubs, associations, discussions, and lectures. Centering these meetings in the school auditorium brings the general public into closer contact with the school. Furthermore, the school performances in the auditorium provide an excellent medium for interpreting the school to the public.

It is desirable, therefore, that the auditorium unit be planned and located in relation to the entire building so as to make it easily accessible to pupils from all parts of the building, as well as to the general public. The auditorium should be located on the ground floor near the center of the building and should be provided with direct approaches from the street to the main entrance. Its size depends upon the size of the school and community, upon the administrative policy of the school, and upon the size of the audiences that normally can be attracted to school functions. In large junior high schools, it may be impractical to have an auditorium large enough to seat the entire student body at one time. In these instances, the student body may be divided into two or more groups for assembly programs. Such division permits the program to be adapted to the level and interests of the groups.

The frequent staging of pageantry and other programs involving large groups of pupil participants makes it desirable to have several large rooms on the stage level, connected directly with the stage so that they may be used as dressing, make-up, and assembly rooms for participants. Since the instrumental and vocal music classes usually furnish a part of auditorium programs, it is advantageous, also, to have the band, orchestra, and vocal music classrooms accessible to the stage. Therefore, the suite of rooms at the rear of the stage may well serve a dual purpose as regular instructional rooms and dressing, make-up, and assembly rooms for participants.

Locker Room.—The suite of rooms at the rear of the building should include storage space for hand and orchestra instruments. The uniforms, stage scenery, and several small practice rooms toward rear architectural features may be planned for the dressing room, such as built-in dressing tables with music cabinets below, adequate and convenient lavatories for pupils, and adequate soundproofing.

Technical standards for effective stages and theaters are well known. The school auditorium theater should be a compromise between professional theatrical standards and the training requirements of schools. Insofar as it is practicable, the many effective technical advantages of public theaters should be incorporated into the school auditorium theater. Thus the acoustics, lighting, soundproofing, ventilation, seating comfort, architectural design and beauty all should receive careful consideration. The size of the proscenium opening, the width of the wings, the size of the stage, provision for scenery, screen, drops, and lighting effects are also of particular importance.

Public standards for musical and theatrical productions have been highly influenced through wide attendance in motion-picture theaters. Although much allowance may be made for amateur pupil performances, there is nevertheless, a critical expectation of excellence that did not exist a generation ago. An adequately arranged and equipped auditorium unit can greatly influence the quality of pupil productions. It should be remembered that all musical performances, pageantry, and other productions are defensible only insofar as they contribute to the development of large numbers of pupils. The production of scenery and the entire management of the stage, as well as the actual performance, should provide instructional activities for pupils.

Gymnasium Unit.—The modern junior-high-school program is placing increasing emphasis upon the health and physical education of pupils. To make possible the most efficient program in this important phase of education, there must be adequate gymnasium facilities for boys and for girls. The gymnasium is usually one of the most expensive units of the school plant. In most schools this unit is used by all pupils every school day. Like the auditorium, it is often used to a great extent by the community. Certain important but relatively minor architectural features of this unit can greatly facilitate the administration of the instructional program and extend its usefulness to the entire school community.

In general, the physical-education suite should be a duplex unit serving both boys and girls to relieve the general congestion caused by the services of the

The front entrance to the gymnasium unit may be located between the main gymnasium rooms. The entrance should include doors opening into both rooms. Furthermore, a desirable physical-education suite is to construct both walls of the entrance hall with folding partitions so that the gymnasium rooms may be opened as a single room unit. The hall should lead directly to twin office suites for teachers. Each office should include an outer office connected with the entrance hall and with the gymnasium room. It should also be connected with an inner office with a separate equipment room, a lavatory, shower, and locker space for teachers. The inner office should open into a short hall connecting the locker room and the gymnasium room. The location of the offices in a central pivotal position in the physical-education unit facilitates supervision of the gymnasium rooms and the locker and shower rooms, and it expedites official contacts with parents and visitors.

Features of the gymnasium room that are not always conveniently located are entrances, exits, bleachers, and lavatories. When the stationary bleachers are placed opposite the front side of the gymnasium rooms, the space under the bleachers may be used for lavatories and for storing playground equipment. These lavatories serve the pupils from the playgrounds after school and the public during evening performances. Entrances to these lavatories should be made directly from the gymnasium rooms and from the playgrounds. In addition to exits into the entrance hall and locker rooms, gymnasium rooms should have exits onto separate playgrounds in the rear of the building.

Locker rooms may be located behind the gymnasium rooms and the offices. The doorway of the hall connecting the shower room and the gymnasium room should be screened inside the locker room for privacy. The main lavatories should be located in the locker room so that they are convenient both to the dressing room and to the showers. It is desirable to place dressing room lockers on one side of the room so that they may be shut off from the showers and drying room with accordion steel gates. This provision frees the showers for community use in the evenings. Supplementary rooms and lockers may be placed adjacent to the showers for community use. It is well to locate the towel cage so that towels may be issued to pupils as they enter the showers and collected as pupils leave the drying room. The corrective exercise room may be

located adjacent to the center partition facing the inner office. Locker rooms should open onto the playgrounds in the rear.

The swimming pool may well be located behind the locker rooms toward the center of the building so that entrances into the pool may be provided from both locker rooms. Highly desirable also are additional entrances to the pool from the adult dressing rooms, if these are provided for community use. Many other special arrangements and features that should become a part of the physical-education unit are advocated by leading architects, engineers, and educational specialists in school housing.¹

Provisions facilitating the administration of the health and physical-education program, promoting the safety of pupils, and increasing the adaptability and convenience of the building both for pupils and for the public are especially to be noted in planning.

Cafeteria and Household-arts Unit.—Few relatively modern school services contribute more largely to pupil development and welfare than the cafeteria with its well-balanced hot lunches. This is an important service for all pupils, but it is particularly essential for the large group of malnourished pupils who are commonly found in all junior high schools.

The cafeteria may not reasonably be restricted to the business of supplying food to pupils, it also provides equipment and materials useful for many instructional pupil experiences. Frequently the cafeteria is supervised by a teacher-dietician, who teaches some foods classes. In order that she may fulfill both these responsibilities and in order that there may be a close correlation between the preparation of foods for the cafeteria and the preparation of foods in household-arts classes, it is well for the cafeteria unit to include rooms and equipment for the entire household arts department. These household-arts instructional rooms should include well-equipped foods, clothing, and homemaking rooms, with adjoining fitting rooms, laundry, and a demonstration dining room. Obviously, also, the cafeteria unit should provide ample kitchen space and equipment and separate service counters and dining room space for pupils and for faculty.

Other Functional Units and Features.—In addition to the functional units that have been discussed, there are, to be sure, many more units, classrooms, and other plant services that must be provided. The library has important educational contributions to make to the instructional program of the modern junior high school.

¹ *Ibid.*, pp. 130-139

The significance of the size, arrangement, and attractiveness of the rooms of the library unit is discussed in Chap. X. Other frequently provided unit groupings are the industrial arts unit, the science unit, the art unit, and the commercial unit, including rooms for duplicating and for pupil publications. Adequate classrooms and equipment are required for social studies, mathematics, English, and the various other subjects that may be offered. Many of these subjects may be taught in regular classrooms with a general type of equipment and need not be in functional units.

In addition to the previously mentioned health quarters, a special convalescent or relaxation unit should be provided in a quiet, relatively secluded part of the building, preferably on the ground floor. This supplementary health unit should be designed to serve convalescents and physically handicapped children and should consist of adequately equipped relaxation rooms, one for boys and one for girls. A desirable arrangement connects these rooms with a shared patio and classroom.

In order to supplement the auditorium, it is desirable to provide a little theater for small-scale activities such as one-act plays, forum discussions and debates, motion pictures, and special musical programs that require space larger than classrooms. This little theater may well be used by the student court and council and parent-teacher organizations.

Adequate provisions should be made for the custodian's office and closets, for well-equipped and distributed lavatories for boys and for girls, and for faculty lounges for men and for women.

The extent to which a school may desire additional groupings of rooms will depend somewhat upon the organization of the instructional program and special services provided. In general, it may be said that the specific location of rooms throughout the building, including their size and equipment, should be planned to provide in the best way possible for specific instructional needs of pupils, teachers, administrators, and the community.

Lighting—Probably no feature of schoolhouse planning has received such inadequate attention as has school lighting. The effect of poor lighting upon vision, general health, and the educational program, however, is receiving increasing attention. The recognition of the importance of good lighting can be seen in the improvement of lighting conditions in industrial plants, commercial buildings, homes, and in many schools.

Previously accepted standards were intended to furnish proper lighting. Prominent among these are that windows be of maximum

height in each room, the glass area be equal to one-fourth or one-fifth of the floor area, pupils be seated so that light enters over the left shoulder only, light be unobstructed by overhanging eaves, adjacent buildings, or trees, glare on blackboard and on the surface of pupils' work be avoided, and adequate shades be provided.

These standards may provide fairly adequate light for ordinary classrooms on bright days, but they will not provide light for reading or other necessary pupil activities at all pupil stations on cloudy days. To illuminate classrooms properly during the day as well as in the evening, it is therefore necessary to provide adequate artificial light throughout the entire building.

There has been much disagreement as to the amount and type of light needed for different classroom activities. Various standards have been presented for lighting equipment that is intended to provide adequate illumination in classrooms. The quality, the amount of light, and the location of the source of light determine the effectiveness of the illumination. It is highly important for school officials to familiarize themselves with the recommendations of illumination engineers and vision specialists with reference to standards for the amount of light needed. The number of foot-candles of light recommended for various types of work are shown in Table XXVIII. In presenting these standards, the Illuminating Engineering Society and the American Institute of Architects make the following statement:

It was not until quite recently that the facts concerning the penalties and disadvantages in the nature of eyesight abuse and inefficient seeing which are engendered by our present-day indoor tasks and meagre light were appreciated. In a great many classrooms today the illumination both natural and artificial much of the time falls in the neighborhood of 5 foot-candles or even lower at numerous work places.

Today, improvements in building and window construction and in artificial lighting equipments and services make it possible to provide practically and economically the lighting necessary to perform the functions of modern eye-use.

Practical tests and experience indicate that not less than the illumination values given in Table I should be maintained in actual service on the work or in the space in which the given activity is carried on. Higher values will contribute greatly to accuracy, speed and ease.¹

¹ ILLUMINATING ENGINEERING SOCIETY AND THE AMERICAN INSTITUTE OF ARCHITECTS. *American Recommended Practice of School Lighting* pp. 10-11. Illuminating Engineering Society, New York, 1938.

Somewhat higher standards than these are recommended by Luckiesh and Moss¹ for detailed or prolonged tasks

TABLE XXVIII — MINIMUM FOOT CANDLES OF ILLUMINATION FOR VARIOUS CLASSROOM WORK*

Location	Minimum Operating Foot-candles of General Illumination
Classrooms—on desks and blackboards, study halls, lecture rooms	15
libraries—on desks and tables	15
Offices—on desks	15
Sewing rooms, drafting rooms, art rooms, and other rooms where fine detail work is to be done—on the work	25
Shops laboratories—on the work	15
Gymnasiums—main exercising floor, wrestling, playrooms, swimming pools, basketball, handball, boxing	15
Auditoriums, assembly rooms, cafeterias, and other similar rooms not used for study	6
Locker rooms, corridors, stairs, passageways, toilets, and all indoor areas traversed by students	4
Sight-saving classrooms—on desks and blackboards	30

*ILLUMINATING ENGINEERING SOCIETY AND THE AMERICAN INSTITUTE OF ARCHITECTS, *American Recommended Practice of School Lighting* p. 11 Illuminating Engineering Society New York, 1938

These standards have reference to the amount of light only and neglect the important factors of quality and source that should likewise receive the careful attention of school officials and illuminating engineers

Interior Decoration—Closely related to the amount and quality of light is the color scheme of the rooms. Colors vary greatly in the amount of light reflection. Trends² in interior decoration in school buildings are toward artistically decorated rooms in various color combinations that balance appealing, artistic qualities with the essential light-reflecting properties of different finishes. Considerable attention should therefore be given to the interior decoration of classrooms to avoid the deadening monotony of older types of color scheme and to provide optimal lighting effects

SUMMARY

There is a strong reciprocal influence between the local educational program and the school plant. Increasingly the functional

¹ LUCKIESH, MATTHEW, and MOSS, FRANK N., *The Science of Seeing*, pp. 345-350 D. Van Nostrand Company, Inc., New York, 1937

² WILDESUM, FREDERIC P., "The Call for Color" *The Nation's Schools*, Vol. 27, No. 6, pp. 40-42, June, 1941

aspects of school plants are being recognized. If the junior high school is to realize its objectives, the entire plant must provide adequate facilities for the total educational program.

There are many factors to be considered in determining the location and size of school sites, as well as in planning school buildings. These factors may best be resolved through the cooperative planning of educators, architects, and engineers.

The ability and willingness of a community to pay for its school plant needs vary with general and local economic conditions, with the appreciation of plant needs and functions, and with the extent to which the building program is adjusted to economic conditions.

Local educational needs and philosophy should determine the local educational program. Functional relationships within the program should be reflected in the school plant. Consideration should therefore be given to the size and placement of functional units of the building and site, to the adequacy of the equipment, to pupil and community uses of the building, and to the ease of administration and of maintenance.

Attention should be given to the coordination of adequate lighting with the interior decoration of classrooms in order to provide optimal lighting effects and attractive, pleasing color schemes.

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CHAPTER XVIII

LOOKING TO THE FUTURE

The junior high school of today has resulted from many social and educational changes that are continuing to exert profound influence over all public education. During its brief history of thirty-two years as a separate administrative unit of public education, the junior high school has evolved into a functional unit quite different from the original junior high school. Evolutionary trends in education are not always indicative of the best educational procedures and outcomes, but when trends are supported by the findings of experimental studies and by educational outcomes in relation to social needs, they suggest desirable lines of future development.

The preceding chapters review junior-high school education today, not necessarily as explicit procedures of existing schools but in many cases as procedures indicated by educational psychology. On the whole, junior high schools have not developed ways of adequately meeting present objectives, nor have they even succeeded in applying all the important findings of educational science. Indeed, our prevailing social philosophy, together with measurements of educational outcomes, indicates a need for many new improvements and extensions of junior-high-school education. Furthermore, changes in society in relation to an evolving understanding and interpretation of pupil-social needs demand a continuous concomitant development of all divisions of public education. It is to be understood, of course, that the continuous evolution of education should be based upon an appropriate interpretation and application of the findings of educational science.

The present chapter endeavors to envision possible and desirable future developments in junior-high school education. These projections into the future are not to be interpreted as scientific predictions of imminent change, for the realization of some obviously would depend upon relatively idealistic general social developments.

If the junior high school of the future is to create a suitable environment that will enable children of junior-high school age

to understand and appreciate themselves in relation to physical, economic, social, and spiritual aspects of the world in which they live and to develop themselves in relation to their abilities and needs, both the imminent and remote changes in junior-high-school education must be in the direction of (1) better qualified professional personnel, (2) more favorable professionalized conditions of service, (3) increased availability and use of more appropriate instructional materials and procedures, (4) expanded and improved school services, (5) adequate school plants planned to engender the realization of educational objectives, (6) democratization of education, and (7) equalization of opportunities through both state and Federal support of education.

PROFESSIONAL PERSONNEL

Preceding chapters point out the dependence of effective education upon the more specific aspects of educational science and upon adequately prepared teachers who understand the needs of pupils and the needs of society. Obviously needed is a more intelligently conceived plan of teacher education that provides for a more comprehensive general education and for a more thorough specialized professional training.

For many years trends in teacher education have been toward the extension of the preparatory training period. The junior high-school teacher of the future will probably be required to show evidence of a broad cultural education at least the equivalent of the present four year liberal-arts degree as a foundation for professional teacher-education courses. It is not at all unlikely that the professional education of junior high-school teachers will begin at the graduate level and continue for three additional years. Two of these are likely to be devoted to the study of educational science in relation to an increased mastery of junior-high-school teaching fields. Three principal points of training emphasis are indicated (1) the nature and needs of pupils, (2) the nature and needs of society, and (3) the means by which these needs may best be met. The third year of professional preparation is likely to be a full year of internship under the direction of training schools and master teachers in junior high schools. The full time interne teacher will probably serve as a teaching assistant and will receive one-half the minimum salary paid to regular teachers.

Such additional preparatory requirements will engender the selection of more capable teaching candidates who are interested in

education as a profession. Thus only those who are willing to become more competent pupil guides, interpreters, and leaders will enter the profession.

From the very nature of the work of developing children in a changing society, it is becoming increasingly apparent that no amount or kind of preparatory training can be sufficient for the future and that for greatest effectiveness a larger emphasis must be placed upon the continuous in service education of teachers.

PROFESSIONALIZED CONDITIONS OF SERVICE

One of the important changes in store for junior-high school education is the improvement of the school conditions under which teachers must work. In harmony with widespread industrial and economic changes, noticeable improvements are being made in the working conditions of persons in most occupations and professions. Factors that are involved include hours of work, higher salaries, pleasant and favorable environmental conditions, social prestige, security, opportunities for growth and advancement, and retirement annuity.

If favorable working conditions are important for industrial efficiency, they would seem to be even more essential for teachers and teaching. Certainly not all the present professional working conditions of teachers contribute to their professional efficiency or to their happiness and general welfare.

Conditions indicate a need for salary increases that are appropriate to the qualifications and training required for teachers of the new junior high school education. It is altogether likely that such increases will have to be made in order to attract the most capable persons into the profession. Minimum and maximum salaries will be adjusted more nearly to correspond to incomes that can be earned by equally capable persons in professional, commercial, and artistic occupations.

In the future, the number of pupils in classes will be reduced to permit more individualized instruction. Because of the elaborate detailed records involved in effective systems of pupil accounting and because of the detail and routine involved in the collection and preparation of instructional materials, better qualified and higher salaried teachers will be provided with clerical help to permit greater use of teacher time in planning and administering instructional activities. Teachers will need to engage increasingly in home and community contacts, in individual conferences with pupils,

and in sponsoring extraclass activities of pupil groups. Any extension of these activities over present teacher responsibilities will necessarily result in a reduction of the number of regular scheduled periods for group instruction. Obviously, a larger school staff will be required for instruction and for special school services.

More ample provisions will be made for the professional advancement of teachers in proportion to individual initiative and effectiveness. Greater social and professional prestige will be accorded teachers. Similarly, as a means of promoting in-service teacher growth, the new junior high school is likely to find it desirable to provide for sabbatical leaves of absence for one or more semesters. No less effective will be reasonable provisions for security and retirement. It is a curious anomaly of our social organization that excludes teachers from Federal provisions for social security, especially where states retire indigents with higher pensions than are available under prevailing teacher annuity plans.

To justify more favorable working relationships and privileges, society may rightly demand not only better qualified teachers but a higher professional code of ethics and a more rigorous personal adherence to these standards of conduct both among teachers and among administrators.

INSTRUCTIONAL MATERIALS AND PROCEDURES

The junior high school of the future will have a greater abundance of effective teaching materials and a greater variety of scientific teaching procedures. These will be made available through experimental studies, through more widespread development of cooperative planning and production activities within local school systems, and between school systems within the state and the nation. Suitable materials also will be developed through a closer cooperation between commercial production firms and local and state planning bodies.

Reducing the number of pupils in classes will make possible a wider application of the principles and criteria of grouping, which, in turn, will require more highly differentiated objectives, materials, and procedures, all of which are in conformity with group needs. Reducing the number of groups for which teachers are responsible will allow them time for planning individual and group activities. Similarly, teachers will be accorded ample time for the application of suitable devices for the appraisal of pupil progress and for the

use of a marking system that is based upon sound educational science

SCHOOL SERVICES

Discrepancies between present concepts of the needs of pupils and present school services are indicative of a need for a number of new services and for extensions of those now provided in many schools

The needs of junior-high-school pupils in modern urban society suggest that the schools of the future will provide an organized program of supervised activities that are available for pupils 7 days a week from 8 A.M. until 4 or 5 P.M., depending upon the climate and season, throughout the entire calendar year. Compulsory attendance legislation may not exceed present standards, but modified, supervised activity programs will be available throughout the year. Obviously, the Saturday and Sunday programs will not be compulsory and in all probability will be restricted to supervised cultural, social, or recreational activities

The extension of the regular school day to an 8-hour day will permit modifications of the regular or formal instructional program so as to be more in conformity with the needs of pupils. With a longer school day and year, all homework will be eliminated, special dancing, musical, and other artistic instruction can be provided as needed, but more important than these are the general supervised recreational and cultural activities that will serve as a wholesome civic substitute for the degrading influences of unsupervised adolescent gangs and for the influence of unwholesome commercial recreation centers. Successful pioneering programs of this nature are being operated today by many churches and character-building agencies. However, these are not extensive enough to reach all children during the many hours and days when pupils are not now under the supervision of the school or of the urban home. Already many municipalities are providing effective supervised recreational programs on public-school playgrounds after regular school hours, on Saturdays, Sundays, and during vacation periods. The social and recreational needs of children can also be met through the appropriate use of school-building facilities as well as through the use of outdoor playgrounds

The new, modified junior-high-school program will involve extensions of the school library, the health and physical-education services, provisions for exceptional children, and cooperative school

and community provisions for the guidance and welfare of youth. The school library service will be coordinated more closely with services of the public library, and extensive provisions will be made for recreational reading throughout the extended school day and year. The health services for normal and for delicate children will be extended under socialized medical programs, and adequate rest and nourishment will be provided in accordance with pupil needs. The physical-education and recreation programs will be modified and extended so as to care for the diverse social- and physical activity interests of junior high-school pupils. Provisions for exceptional children will be expanded so as to provide for all types. Outstanding in this connection will be developments to provide for gifted children as well as for the subnormal, physically handicapped, delicate, and socially maladjusted. Provisions for the socially maladjusted will extend the coordination of efforts of the entire community and will result in the development of adolescent courts to handle cases of delinquency and in the development of special local, regional, or state schools for so-called "incorrigible" adolescent offenders. Many states now have such training schools for boys and for girls under sixteen years of age, but relatively few have established them for youth over this age.

THE SCHOOL PLANT

The new junior high-school plant will be planned in accordance with the new program. Larger and more suitable recreational areas and facilities will be provided. These will include more outdoor courts and space for formal games, as well as patios for informal gatherings. Available also will be many indoor innovations such as game rooms, pupil lounges, clubrooms for dancing and other socializing activities of pupils, and better gymnasiums with swimming pools. Classrooms will be larger, better lighted and equipped, and more adaptable to varied instructional needs. Furthermore many building innovations will result from careful general planning for a wider community use of the entire school plant.

DEMOCRATIZATION

Wide community participation in the new junior-high-school education is essential for its evolution and for its success. Increasingly, the community must look upon its schools as a social agency that is concerned not only with specific pupil developments but with

the improvement of the entire community as a good place in which to live. Consequently, the educational, cultural, and recreational interests of adults must be accorded appropriate recognition in school activities directly. Furthermore, adult citizens must be accorded appropriate recognition in planning programs for pupils. Only thus may there be achieved a more effective coordination among many related, but at present dissociated, community services and activities. For greatest effectiveness, public-recreation and public-library services may be coordinated with school recreation and school libraries, character-building programs of churches and other agencies with character-building efforts of schools, correctional and guidance efforts of the courts with those of the home, character-building agencies, and the school, work-education programs with industry, the home, and the school.

One evidence of public interest in school activities is found in parent-teacher organizations. There are many common interests between parent-teacher organizations and the strictly professional organization of teachers and administrators. In the future it is likely that joint meetings of the Congress of Parents and Teachers with teacher associations, elementary and secondary principals, and superintendents' associations will result in mutual understanding of common problems and in more closely coordinated plans for their cooperative solution.

Democratization of education implies that all citizens should participate in planning and administering the school program. Although current parent-teacher organizations do not provide universal representation, more effective ways of enlisting the wider support of citizens will be developed. When the schools become democratized through wide community participation in the planning and administration of the total program, they will need little further interpretation to the community. Thus, through democratization, the public will understand, appreciate, and improve its schools.

FINANCIAL SUPPORT

Obviously the extended and improved junior high-school program of the future will require more money in order to operate effectively. As public participation in the program increases and as the public understanding and appreciation of the value of the program grows, the willingness of the public to support the schools will increase. However, there will remain great inequalities in the abilities of districts and states to support educational pro-

grams The effect of these inequalities will probably be overcome through more adequate state and Federal support

It must be remembered that the cost of educational services must be interpreted in the light of their contributions to the welfare of individuals and to the general welfare of the state and nation All social and educational scientists are agreed that society must develop more effective ways of preventing delinquency and crime Current expenditures for crime are estimated at fifteen billion dollars annually A few additional billions expended in the interests of pupils and society through an adequate educational program might easily cut in half the present cost of delinquency and crime However important we may regard the task of effecting economies in crime, however important we may regard the salvaging of incorrigibles and delinquent youth, there remains the greater, the more fundamental challenge of developing all the children of democracy so that they will enjoy wholesome social adjustments, sound health, and trained intellects, so that they will become imbued with the true spirit of democracy and be dominated by habits of effective democratic living Only thus may the nation add to the real wealth of the nation.

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